U.S. Department of the Interior

Bureau of Land Management
Rawlins and Rock Springs Field Offices

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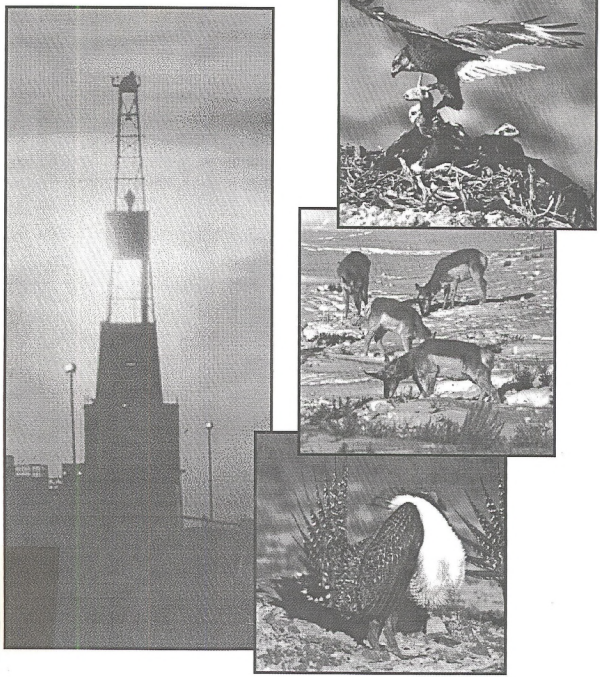
December 1999

Final Environmental Impact Statement Continental Divide/Wamsutter II Natural Gas Project, Sweetwater and Carbon Counties, Wyoming



MISSION STATEMENT

It is the mission of the Bureau of Land Management to sustain the health, diversity, and productivity of the public lands for the use and enjoyment of present and future generations.

BLM/WY/PL-00/005+1610

FINAL
ENVIRONMENTAL IMPACT STATEMENT
CONTINENTAL DIVIDE/WAMSUTTER II
NATURAL GAS PROJECT,
SWEETWATER AND CARBON COUNTIES,
WYOMING

Rawlins and Rock Springs Field Offices
Bureau of Land Management
Rawlins and Rock Springs, Wyoming

This Environmental Impact Statement was prepared by TRC Mariah Associates Inc., an environmental consulting firm, with the guidance, participation, and independent evaluation of the Bureau of Land Management (BLM). The BLM, in accordance with 40 C.F.R. 1506.5(a) and (b), is in agreement with the findings of the analysis and approves and takes responsibility for the scope and content of this document.

December 1999

FINAL ENVIRONMENTAL IMPACT STATEMENT CONTINENTAL DIVIDE/WAMSUTTER II NATURAL GAS PROJECT, SWEETWATER AND CARBON COUNTIES, WYOMING

( ) Draft (X) Final

U.S. Department of the Interior
Bureau of Land Management

Abstract:

This Final Environmental Impact Statement (FEIS) assesses the environmental consequences of a proposed natural gas development project in eastern Sweetwater and southwestern Carbon Counties, Wyoming. This FEIS incorporates by reference most of the material presented in the Draft Environmental Impact Statement (DEIS) for the Continental Divide/Wamsutter II Natural Gas Project and is designed to be used with the DEIS. Copies of the DEIS are available from the BLM Rawlins Field Office at the address given at the bottom of this page.

The DEIS was made available to the Environmental Protection Agency and the public on April 30, 1999, and a Notice of Availability was published in the *Federal Register*. Public meetings were held in Rock Springs on May 24 and in Rawlins on May 25, 1999, and the public comment period for the DEIS closed July 15, 1999. The Executive Summary from the DEIS, modified as appropriate in response to public comment, is presented herein. The DEIS text changes, made in response to public comment and further BLM Interdisciplinary Team analyses, are presented for all modified material by corresponding section in this document. Comments on the DEIS that were received from the public and agencies are reproduced in this document, and BLM responses are presented.

The proposed project entails the drilling, completion, testing, operation, abandonment, and reclamation of natural gas exploration and production operations by Amoco Production Company, Union Pacific Resources Company, Yates Petroleum Corporation, Snyder Oil Corporation, and other operators. The proposed project would use standard procedures as currently employed by other state and regional gas field developments. A maximum of 3,000 well locations and associated ancillary facilities, roads, and pipelines would result in the initial disturbance of approximately 22,400 acres on the 1,061,200-acre project area. Numerous standard, project-specific, and site-specific mitigation measures would be employed to assure that project impacts are minimized on all important resources.

Further information regarding this document can be obtained from:

Mr. Clare Miller
Rawlins Field Office
Bureau of Land Management
P.O. Box 2407
Rawlins, WY 82301-2407
(307) 328-4245

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United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Wyoming State Office
P.O. Box 1828
Cheyenne, Wyoming 82003-1828

In Reply Refer To:
1793 (930)
CD/WAM II NGP

November 30, 1999

Dear Reviewer:

This Final Environmental Impact Statement (FEIS) on the proposed Continental Divide/Wamsutter II (CD/WII) Natural Gas Project located in Carbon and Sweetwater County, Wyoming, is submitted for your review and comment. The FEIS has been prepared pursuant to Title 40, Code of Federal Regulations, Parts 1500-1508, to analyze the potential impacts from natural gas exploration and development proposed by Amoco Production Company, Union Pacific Resources Company, Yates Petroleum Corporation, Snyder Oil Corporation, and other natural gas operators within the CD/WII project area. This document informs the public of the anticipated impacts of the proposed development and alternatives to that proposal. The Bureau of Land Management's (BLM) preferred alternative for this project is the Proposed Action, with additional mitigation measures which would reduce environmental impacts.

The FEIS contains corrected and new material which supplements the Draft Environmental Impact Statement (DEIS) issued April 30, 1999. The FEIS and the DEIS comprise the complete document. Please refer to the DEIS for more detailed analyses and descriptions of the proposed action and alternatives.

A copy of this FEIS has been sent to affected Government agencies and to those persons who either responded to scoping, the DEIS, or otherwise indicated to BLM they wished to receive the document. Copies of the FEIS are available upon request at the following locations:

Bureau of Land Management
Rock Springs Field Office
280 Highway 191 North
Rock Springs, WY 82901
Telephone (307) 352-0256

Bureau of Land Management
Rawlins Field Office
1300 North Third Street
Rawlins, WY 82301
Telephone (307)324-4200

This FEIS is not a decision document. A Record of Decision will be prepared and made available to the public, but not until at

least 30 days after the Environmental Protection Agency (EPA) has published their Notice of Availability of this FEIS in the Federal Register. We anticipate EPA will publish that notice December 10, 1999.

If you wish to comment on the FEIS, we request you make your comments as specific as possible. Comments will be more helpful if they include suggested changes, sources, or methodologies. Opinions or preferences will not receive a formal response. However, BLM will consider them in its decision.

Comments, including names and street addresses of respondents, will be available for public review at the addresses listed above during regular business hours (7:45 a.m. - 4:30 p.m.), Monday through Friday, except holidays. Individual respondents may request confidentiality. If you wish to withhold your name or street address from public review or from disclosure under the Freedom of Information Act, you must state this prominently at the beginning of your written comment. Such requests will be honored to the extent allowed by law. All submissions from organizations or businesses, and from individuals identifying themselves as representatives of officials of organizations or businesses, will be made available for public inspection in their entirety.

Sincerely,

Alan R. Pierson
State Director

EXECUTIVE SUMMARY

Amoco Production Company, Union Pacific Resources Company, Yates Petroleum Corporation, Snyder Oil Corporation, and other natural gas operators (collectively known as the Operators) propose to explore for and develop natural gas reserves on the Continental Divide/Wamsutter II Project Area (CD/WIIPA) in eastern Sweetwater County and southwestern Carbon County, Wyoming, in portions of Townships 15 through 23 North, Ranges 91 through 99 West. The U.S. Department of the Interior, Bureau of Land Management (BLM) (Rawlins and Rock Springs Field Offices) have determined that the Operators' proposed project would constitute a major federal action and therefore requires the preparation of an environmental impact statement (EIS) in accordance with the *National Environmental Policy Act of 1969*, as amended (NEPA). This final EIS (FEIS) was prepared in accordance with NEPA to assess the environmental consequences of the Operators' proposed development (i.e., the Proposed Action) and is intended to provide the public and decision-makers with a complete and objective evaluation of impacts, both beneficial and adverse, resulting from the Proposed Action and reasonable alternatives.

The Proposed Action, two alternative development strategies (i.e., Alternative A--14.0-acre maximum surface disturbance per section in sensitive resource areas [SRAs], and Alternative B--30.0-acre maximum surface disturbance per section in SRAs), and a No Action Alternative are analyzed. Additional alternatives, including those considering CD/WIIPA-wide well densities/spacing patterns, fewer wells, increased surface disturbance per well, phased development, no development, and development in the Adobe Town Wilderness Study Area, were considered but rejected for environmental, economic, and/or legal reasons.

The No Action Alternative analyzed in this EIS would involve the rejection of the Operators' Proposed Action and Alternatives A and B; however, denial of the development alternatives would not constitute a denial of all natural gas development on the area. Since over half of the CD/WIIPA is not federally owned and since the BLM would not deny access to these private- and state-owned lands, nor would the BLM allow the drainage of federal minerals, some development of the CD/WIIPA would occur under the No Action Alternative. For the purpose of this analysis, it is assumed that, under the No Action Alternative, development of the area would occur at levels similar to those that have occurred in the past. Additionally, the project-specific planning measures identified for the Proposed Action and Alternatives A and B (e.g., Reclamation Plan [draft EIS (DEIS) Appendix A], Transportation Plan [DEIS Appendix B], Wildlife Protection Plan [DEIS Appendix D]) would not be implemented under the No Action Alternative. This alternative serves as a benchmark, enabling decision-makers and the public to compare the magnitude of the environmental impacts of the development alternatives.

Public scoping was conducted, with scoping statements mailed to potentially interested parties and the media in March 1995 and May 1997, and public meetings were held. The DEIS was made available for public review on April 30, 1999, and public meetings were held on May 24 and 25, 1999. All issues identified during scoping, review of the DEIS, and BLM Interdisciplinary Team reviews were considered during the preparation of this document.

The proposed project is to explore for and develop natural gas and condensate reserves present in the Almond Formation and other formations at depths of approximately 7,000-10,000 ft in the CD/WIIPA. The CD/WIIPA encompasses approximately 1,061,200 acres (531,400 acres federal surface, 9,800 acres state surface, and 520,000 acres private surface). The BLM has determined that CD/WIIPA lands are available for leasing and development for natural gas resources, and previous development for these resources has occurred on the area. Approximately 845 well locations and associated access roads and pipelines currently exist or have been authorized for the CD/WIIPA. Maintenance of existing wells will continue as authorized by existing permits.

Operators propose to construct, drill, complete, operate, and reclaim a maximum of 3,000 new well locations (7,800 acres - 2.6 acres/location) on variable spacing patterns within the CD/WIIPA beginning in 1999, subsequent to the release of the Record of Decision (ROD) for this project, and continuing for

an estimated life-of-project (LOP) of 30-50 years. Additional construction activities include a total of approximately 1,500 mi of new or upgraded roads (10,000 acres - 0.5 mi/location), 1,500 mi of new pipelines (4,500 acres - 0.5 mi/location), five compressor stations (20 acres - 4 acres/station), one gas processing facility (30 acres), 10 evaporation ponds (34 acres), 5 disposal wells (35 acres), and 50 water wells (25 acres - 0.5 acres/well). Standard procedures as currently used in gas field developments throughout Wyoming would be employed during project development and operations, and all project activities conducted during the LOP would comply with applicable federal, state, and county laws, regulations, and stipulations. Gas from the project would be transported through existing and newly developed pipelines linking natural gas wells with existing regional pipelines in the project area.

Total maximum initial new ground surface disturbance required for the proposed project is estimated to be 22,400 acres for the Proposed Action. LOP disturbance would be approximately 15,900 acres and includes 7,600 acres of existing disturbance since these areas would be required for the project.

It is anticipated that field developments would require 10-20 years, with approximately 150 to 300 wells being drilled per year. The proposed drilling schedule would require an estimated maximum of 15 drill rigs during peak drilling operations. Each drill rig would be operated on a 24-hr basis and require three crews of seven people. As many as 30 people may be at a well location for short periods to conduct specific tasks such as fracturing. It would take approximately 56 days to construct, drill, complete, and tie in each well location. Approximately 13,081 person-years of labor would be required for the project.

Access roads would be constructed, upgraded, and maintained in accordance with the transportation planning process described in the Transportation Plan (see DEIS Appendix B) and the Transportation Planning Technical Support Document for this project, and it is anticipated that the average number of project-required round-trips to and from the field during project development would be 300 per day. The estimated average number of round-trips during project operations (production) is approximately 100 trips per day.

Critical elements of the human environment that could be affected by the proposed project include air quality, cultural resources, environmental justice, floodplains, Native American religious concerns, threatened and endangered (T&E) species, invasive non-native species, hazardous or solid wastes, water quality, wetlands/riparian zones, and wilderness. Potentially significant project-specific adverse impacts to these elements and other resources may occur as follows: surface water resources under any alternative; soils and vegetation on stabilized dunes under the Proposed Action and No Action Alternatives; oil and gas resources under any alternative that denies mineral exploration/development/resource extraction of existing leases or authorizes mineral exploration and development beyond the reasonably foreseeable oil and gas development estimates provided in BLM resource management plans (RMPs); recreational users and rural residents that are displaced from the CD/WIIPA; big game, sage grouse, and raptor productivity as a result of indirect impacts during project development under the Proposed Action; landscape character in undeveloped areas under any alternative; and visual resources in Visual Resource Management (VRM) Class II areas under the Proposed Action and No Action Alternatives.

The proposed project is generally in conformance with the BLM Great Divide Resource Area RMP (Rawlins Field Office), and is entirely in conformance with the Green River (Rock Springs Field Office) Resource Area RMP, the Sweetwater and Carbon County land use plans, and the State of Wyoming land use plan. The BLM would not authorize actions that are not in compliance with the RMPs.

The CD/WIIPA has a midcontinental climate with windy conditions, limited rainfall, and long cold winters and is located in the Great Divide and Washakie Basins. The topography is generally comprised of flats, basins, badlands, buttes, and rims, and elevations range from 6,500 to 7,500 ft. Ephemeral drainages north of the Continental Divide flow north to the Great Divide Basin, whereas drainages south of the divide flow to the Green River or Little Snake River. Ground and surface water are variable in quality, and the major uses are for industry and livestock. No significant impacts to ground water resources in the CD/WIIPA are anticipated under any

alternative; however, if increased sedimentation and/or salinity results in the loss of proper functioning condition in area drainages or worsened conditions in drainages classified as functionally at risk, significant impacts may result under any alternative.

Although the final predicted air quality impacts did not change significantly, the DEIS air quality impact assessment was revised in order to address the following items: 1) the CD/WIIPA near-field particulate matter emission assumptions and impact analyses were revised using Rock Springs, Wyoming, meteorological data; 2) potential well blowdown emissions were included and the hazardous air pollutant (HAP) and ozone impact analyses were revised; 3) potential oxides of nitrogen (NO_x) emissions for the CD/WIIPA wells were corrected; 4) potential NO_x and sulfur dioxide (SO_2) emissions from the Lost Cabin Gas Plant were corrected for seasonal operation; 5) potential particulate matter emissions from the Seneca Coal facility (Colorado permit no. 82R0258F) were corrected; 6) potential particulate matter, NO_x, and SO_2 emissions from the SF Phosphates facility (Wyoming permit no. CT-550A4) were added to the emissions inventory; 7) several other Colorado emission sources were correctly analyzed as potential NO_x emissions, rather than as SO_2 emissions reported in the DEIS; 8) hourly scaling factors were applied to several Wyoming portable emission sources; and 9) a calculation error regarding potential formaldehyde impacts reported in the DEIS was corrected in this FEIS. Based on these revisions, potential air quality impacts were re-analyzed and reported in both this FEIS and a Revised Air Quality Impact Assessment Technical Support Document (BLM 1999d).

Since BLM-approved activities must comply with all applicable local, state, tribal, and federal air quality laws, statues, regulations, standards, and implementation plans, significant adverse impacts to air quality are not anticipated to occur from implementation of any of the alternative actions.

Localized short-term increases in carbon monoxide (CO), nitrogen dioxide (NO_2), ozone, particulate matter, and SO_2 concentrations would occur, but maximum concentrations would be below applicable ambient air quality standards. Similarly, HAP concentrations (to well rig operators) and the related incremental cancer risks at residences (assumed to be located either 1,650 ft (500 meters) from a well or 13,100 ft (4,000 meters) from the gas plant/compressor) would be below significance levels, even at the maximum assumed emission rates.

Although not a regulatory Prevention of Significant Deterioration (PSD) increment consumption analysis, potential direct project impacts would also be below applicable PSD Class I and II increment levels. No significant atmospheric deposition (acid rain) impacts are predicted to occur in sensitive area lakes, including the extremely sensitive lakes in the PSD Class I Mount Zirkel Wilderness Area.

Assuming project and other reasonably foreseeable natural gas compressor NO_x emission rates of 2 grams/horsepower-hour (g/hp-hr), which is possible but greater than levels recently permitted by the Wyoming Department of Environmental Quality - Air Quality Division (WDEQ-AQD), there is a potential for a "just noticeable change" cumulative visibility impact (greater than 1.0 deciview) on a single day at the PSD Class I Rawah Wilderness Area (at 1.69 deciview).

Direct project operations (under the Proposed Action or any alterative, including No Action) would not exceed this threshold alone. The visibility impact analysis assumed a 1.0 deciview just noticeable change would be a reasonably foreseeable significant adverse impact, although there are no applicable state or federal regulatory visibility standards. In addition, this predicted visibility impact may be an artifact of the modeling analysis, where distant hourly optical conditions are assumed to occur simultaneously in each sensitive receptor. Finally, given the reasonable but conservative nature of the cumulative air quality impact analysis (e.g., assuming all proposed wells would go into full production for the LOP and all compressors would operate continuously at the 2 g/hp-hr NO_x emission rate), it is unlikely that a just noticeable change would actually occur in the mandatory federal PSD Class I Rawah Wilderness Area even on a single day due to the cumulative sources combined.

Approximately 150 soil map units occur in the CD/WIIPA, and most have moderate permeability and low productivity. Soil erodibility rates vary, but much of the area has erodibility limitations, most notably at sand dunes, other known windblown

deposits, and badland locations. Significant impacts to soils could occur under the Proposed Action if stabilized sand dunes are reactivated; however, with the surface disturbance limitations identified for sand dunes under Alternatives A and B, no significant impacts to soils are anticipated under these alternatives. Under the No Action Alternative, impacts to soils would occur at existing allowable levels, and if stabilized dunes are reactivated significant adverse impacts could result. Furthermore, impacts could be increased from those of the Proposed Action and Alternatives A and B due to the absence of coordinated reclamation and transportation planning efforts (see DEIS Appendices A and B).

Plant cover values in the area are variable on the three dominant vegetation types--Wyoming big sagebrush, greasewood fans and flats, and desert shrub communities. Approximately 110,668 animal unit months are provided in the 26 grazing allotments on the area. Wetlands in the area are limited (<1.0% of the CD/WIIPA), are restricted to drainage bottoms and around impoundments, and would be avoided during project development, where practical. A Reclamation Plan for the project has been prepared (see DEIS Appendix A), and adherence to the reclamation protocol specified in the plan would minimize potential adverse effects to soils, vegetation, and related land uses under the Proposed Action and Alternatives A and B. Since the Reclamation Plan would not be applied under the No Action Alternative, impacts to vegetation could be increased under this alternative. Further, potential significant impacts could occur from stabilized dune reactivation under the Proposed Action and No Action Alternatives.

Several fossil localities of importance are known to occur within the CD/WIIPA, and additional important fossils are likely to be discovered in the area. Site-specific paleontologic surveys and monitoring would be conducted as necessary to minimize potential adverse impacts to important fossils, and no significant impacts are anticipated under any alternative.

There are currently no mineral development actions proposed for the CD/WIIPA other than oil and gas development and small-scale gravel/aggregate mining operations, nor are there likely to be other mineral development proposals to mine coal, oil shale, or locatable minerals due to their apparent lack of availability. Exploration for other minerals may occur on existing CD/WIIPA leases or claims, and potential development of other mineral resources on the CD/WIIPA may be delayed until after the LOP. The development of oil and gas reserves from the CD/WIIPA as proposed by the Operators is consistent with local and regional land use planning decisions for the area; however, the oil and gas reserves extracted from the area would be unavailable for future generations. Denial of oil and gas exploration and development activities would constitute a significant impact since it would be in violation of contractual agreements between the U.S. and lessees.

During the LOP and beyond, the CD/WIIPA would remain suitable for the historic land uses of livestock grazing, wildlife use, and recreation; however, the predominant use of the area would be oil and gas development for the LOP. While no significant impacts to land use are anticipated under any alternative, some recreational users of the CD/WIIPA may be displaced due to the presence of oil and gas developments.

Pronghorn antelope, mule deer, and elk are present on the project area, as is crucial winter habitat for all these species. While direct impacts to big game species are not anticipated to be significant from the Proposed Action, indirect impacts (e.g., displacement due to human activities) may be significant during project development (10 to 20 years). Indirect LOP impacts are not anticipated to be significant. Furthermore, significant cumulative direct and indirect impacts may occur to pronghorn in the Red Desert Herd due to loss of crucial winter habitat; however, under implementation of Alternatives A and B which provide further protection of crucial winter habitat, no significant direct, indirect, or cumulative impacts are anticipated. Impacts to big game under the No Action Alternative may be increased from those of the Proposed Action and Alternatives A and B due to the absence of coordinated wildlife protection efforts (see DEIS Appendix D).

Sage grouse leks and raptor nests occur in and adjacent to the area, and monitoring of these important resources would be conducted annually under the Proposed Action and Alternatives A and B to determine the activity status of leks and nests

proximal to proposed development sites as specified in the Wildlife Protection Plan for this project (see DEIS Appendix D). Significant impacts to sage grouse and raptors may occur under implementation of the Proposed Action from nest abandonment and/or reproductive failure; however, under implementation of Alternatives A and B, no significant impacts are anticipated. Impacts to raptors and sage grouse under the No Action Alternative could be increased from those of the Proposed Action and Alternatives A and B due to the absence of coordinated wildlife protection efforts (see DEIS Appendix D).

Potential impacts to wild horses under the Proposed Action and alternatives are not anticipated to be significant.

T&E species that may occur on the area include black-footed ferret, bald eagle, peregrine falcon, and Ute ladies' tresses as described in the Biological Assessment for this project (see DEIS Appendix E). The project is unlikely to adversely effect most of these species; however, adverse effects could occur to black-footed ferret (if present in the CD/WIIPA) where appropriate surveys for the species are not conducted and/or where prairie dog complexes found to contain black-footed ferret are not avoided. Issues regarding black-footed ferret will be resolved during on-going formal consultation with the U.S. Fish and Wildlife Service (USFWS). Consultation results may include a commitment to implement additional protection measures in prairie dog complexes found to contain black-footed ferret. Consultation results will be presented in the ROD for this project.

Swift fox (candidate species) and mountain plover (proposed threatened species) potentially occur on the area, and four T&E fish species--Colorado squawfish, humpback chub, bonytail chub, and razorback sucker--occur downstream in the Green River/Colorado River drainage. No adverse effects to swift fox and the four T&E fish species or significant impacts to any state sensitive species are anticipated from project development under any alternative. However, adverse affects to mountain plover habitat (no adverse effects or jeopardy would occur to individuals) may occur and the BLM and USFWS are currently conducting formal conferencing to develop appropriate protection strategies. Conferencing results may include modification of existing survey and protection protocol. Conferencing results will be presented in the ROD for this project.

Potential adverse impacts to cultural resources would be mitigated through data recovery and/or avoidance of significant properties. Site-specific surveys for cultural resources would be conducted prior to disturbance, and formal Wyoming State Historic Preservation Office consultation would occur where cultural resource properties may be impacted. If eligible cultural properties are found within the CD/WIIPA and they cannot be avoided, a data recovery program would be implemented. No significant impacts to cultural resources are anticipated under any alternative.

No sites of Native American religious or cultural importance are known to occur on the CD/WIIPA, and continued consultation with potentially affected Native American tribes would occur as necessary to ensure all such sites are identified. If sites or localities of religious and/or cultural importance are identified, coordinated efforts would be made to ensure adequate site protection. No significant impacts are anticipated under any alternative.

Communities most likely to be affected by the proposed project are Wamsutter and Rock Springs in Sweetwater County and Rawlins in Carbon County. Socioeconomic impacts to these cities and counties are anticipated to be primarily beneficial, with total increased salaries estimated at $33-$66 million per year during the 10-20 years of project development and total government revenues estimated at approximately $1.2 billion for the first 25 years of the project. Significant adverse effects to rural residential areas could occur under the Proposed Action if area residents are displaced. Under the No Action Alternative, the economic benefits of the action alternatives would not be realized, and significant adverse impacts may occur by foregoing revenue generation.

Most of the CD/WIIPA occurs within VRM Class III and IV areas, and the Proposed Action is consistent with VRM management objectives for these areas. However, 22,600 acres of the CD/WIIPA occurs within VRM Class II areas, and development in these areas under the Proposed Action may result in a significant change in landscape character. No significant impacts to visual resources are anticipated

under Alternatives A or B since surface disturbance limitations would be applied in VRM Class II areas. Under the No Action Alternative, impacts to visual resources would continue at existing authorized levels; however, impacts could be increased from those of the Proposed Action and Alternatives A and B due to the absence of coordinated reclamation and transportation planning efforts (see DEIS Appendices A and B). Visual resource impacts would be mitigated under all development scenarios by locating and painting aboveground facilities to blend with the natural landscape. Nonetheless, the landscape character of the CD/WIIPA would change from relatively undeveloped to an active oil and gas field for the LOP and until reclamation is successful.

Numerous standard project-specific and site-specific mitigation measures would be employed during all phases of the project to assure that potential impacts are minimized. Site-specific measures would be applied as specified in approved Applications for Permit to Drill and rights-of-way applications for each new project feature. Surveys and/or monitoring would be conducted for cultural resources, paleontological resources, raptor nests, sage grouse leks, T&E and candidate and special status species, and reclamation areas to document their status relative to specific disturbance activities.

Reclamation would be conducted as soon as possible on areas disturbed during initial construction that are not required for the LOP. Upon completion of the project, all wells would be plugged and abandoned, surface facilities would be removed, and most disturbed areas would be reclaimed and revegetated.

This EIS presents the BLM's analysis of environmental impacts under the authority of NEPA and associated rules and guidelines. The BLM will use this analysis to make a decision regarding the continued authorization of construction, drilling, completion, operation, and reclamation activities as proposed by the Operators for exploration and development of natural gas in the CD/WIIPA. The decision to allow development of CD/WIIPA lands was made in the Great Divide and Green River RMPs, in which it was determined that CD/WIIPA lands were available for leasing.

The BLM's preferred alternative for this project is the Proposed Action, with mitigation measures (as described in the EIS), that would further reduce environmental impacts. This selection is based on the analyses presented in this EIS and incorporates compliance with the Great Divide Resource Area (GDRA) (Rawlins Field Office) and Green River Resource Area (GRRA) (Rock Springs Field Office) RMPs. Mitigation measures include the following:

1) applicant-committed mitigation/environmental protection measures (EIS Sections 2.1, 2.6, and especially 2.6.13);
2) Reclamation Plan (EIS Appendix A);
3) Transportation Plan (EIS Appendix B);
4) Hazardous Materials Summary (EIS Appendix C) (BLM 1998a);
5) Wildlife Protection Plan (EIS Appendix D);
6) Biological Assessment (EIS Appendix E); and
7) additional mitigation measures identified for various resources which may be selected in the ROD for this project.

The BLM believes that the analyses presented in this EIS demonstrate that the Proposed Action with mitigation measures would meet the requirements of 43 *Code of Federal Regulations* (C.F.R.) 3162.1(a), which directs Operators to conduct "all operations in a manner which ensures the proper handling, measurement, disposition, and site security of leasehold production; which protects other natural resources and environmental quality; which protects life and property; and which results in maximum ultimate economic recovery of oil and gas with minimum waste and with minimum adverse effect on the ultimate recovery of other mineral resources."

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PREFACE

This Final Environmental Impact Statement (FEIS) assesses the environmental consequences of a natural gas exploration and development project in the 1,061,200-acre Continental Divide/Wamsutter II Project Area (CD/WIIPA) in eastern Sweetwater and southwestern Carbon Counties, Wyoming, on portions of Townships 15 through 23 North, Ranges 91 through 99 West. This document is not a complete reprinting of the Draft Environmental Impact Statement (DEIS) for the Continental Divide/Wamsutter II Project. It incorporates by reference most of the material presented therein and identifies changes in the DEIS required as a result of public and agency comment on the DEIS and further Bureau of Land Management (BLM) Interdisciplinary Team (IDT) environmental studies and analyses. The DEIS is required to accompany this document because only the modifications, corrections, and additions are provided herein. For ease of reference, inserts, deletions, and modifications to the DEIS are presented herein under the section numbers and headings, page number, column, paragraph, and line.

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MODIFICATIONS, CORRECTIONS, AND ADDITIONS TO THE CONTINENTAL DIVIDE/WAMSUTTER II DRAFT ENVIRONMENTAL IMPACT STATEMENT

ABBREVIATIONS AND ACRONYMS

Page xxv, column 2. After the acronym "PFC" insert a new acronym and definition as follows: "pH acidity measurement unit (negative logarithm of the hydrogen ion [H^+] concentration)".

Page xxiv, column 2. Change "mbo" to "mmbo".

1.0 INTRODUCTION

Page 1-1, column 2, line 16. Change the words "to only" to "only to".

1.2.4 Land Use Planning

Page 1-9, column 1, paragraph 3, line 11. After the acronym "APDs," insert the acronym "RODs,".

1.2.5 Oil and Gas Leasing

Page 1-9, column 2, paragraph 4, line 9. After the word "facilities" insert "on federal mineral estate".

1.2.8 Field Development

Page 1-12, column 1, paragraph 2, line 1. After the word "and" insert the word "adequate".

Page 1-12, column 2, paragraph 2. After the paragraph insert a new paragraph that reads:

> "Potential drainage situations are identified by the BLM Reservoir Management Group based on known well locations and assumed area of well influence. Actual drainage is determined by first calculating recoverable reserves (usually 6 months of production history) and by measuring or calculating reserve parameters. With this information, a radial drainage circle is then calculated. If the drainage circle intersects a federal lease line, then actual drainage is occurring."

1.4.1 Initial Involvement/Scoping

Page 1-13, column 2, paragraph 2. After the second paragraph insert a new paragraph that reads: "The DEIS was made available to the EPA and the public on April 30, 1999, and a Notice of Availability (NOA) was published in the *Federal Register*. Public meetings were held on May 24 and 25, 1999. Comments on the DEIS and BLM responses are presented in Chapter 7.0 of this FEIS."

2.0 PROPOSED ACTION AND ALTERNATIVES

Page 2-1, column 1. After the second paragraph insert the following:

"The BLM's preferred alternative for this project is the Proposed Action, with mitigation measures as described in the DEIS and FEIS that would further reduce environmental impacts. This selection is based on the analyses presented in this EIS and incorporates compliance with the GDRA and GRRA RMPs (BLM 1987a, 1988b, 1990a, 1992, 1996a, 1997a). Mitigation measures include the following:

1) applicant-committed mitigation/environmental protection measures (EIS Sections 2.1, 2.6, and especially 2.6.13);
2) Reclamation Plan (EIS Appendix A);
3) Transportation Plan (EIS Appendix B);
4) Hazardous Materials Summary (EIS Appendix C) (BLM 1998a);
5) Wildlife Protection Plan (EIS Appendix D);
6) Biological Assessment (EIS Appendix E); and
7) additional mitigation measures identified for various resources which may be selected in the ROD for this project.

The BLM believes that the analyses presented in this EIS demonstrate that the Proposed Action with mitigation measures would meet the requirements of 43 C.F.R. 3162.1(a), which directs Operators to conduct "all operations in a manner which ensures the proper handling, measurement, disposition, and site security of leasehold production; which protects other natural resources and environmental quality; which protects life and property; and which results in maximum ultimate economic recovery of oil and gas with minimum waste and with minimum adverse effect on the ultimate recovery of other mineral resources."

The preferred alternative is to permit up to 3,000 well locations (1,500 on BLM-managed lands) in the CD/WIIPA. Approximately 1,500 mi of new roads with adjacent pipelines, five compressor stations, one gas processing facility, 10 evaporation ponds, five disposal wells, and 50 water wells are also included under the preferred alternative. Standard procedures as currently used in gas field developments throughout Wyoming and associated applicant-committed procedures would be employed during project development and operations. All project activities would comply with applicable federal, state, and county laws, regulations, and stipulations.

Development would occur on a yearlong basis provided there is adequate advance planning and construction. Roads would be constructed, upgraded, and maintained in accordance with the transportation planning process described in the Transportation Plan for this project (see DEIS

Appendix B). Transportation planning would be implemented annually based on Operator plans and needs and public input.

Surveys for raptors and sage grouse would be conducted if activities are proposed between February 1 and July 31. Activities would be restricted within a 0.5-mi radius of active raptor nests, except ferruginous hawk nests, for which the seasonal buffer would be 1.0 mi. Surface structures requiring repeated human presence would not be constructed within 825 ft (2,000 ft for bald eagles) of active raptor nests, where practical.

Surface-disturbing activities would be avoided within 0.25 mi of sage grouse leks, and construction activities would be restricted within 2.0 mi of active leks from March 1 to June 30. High-profile structures would not be constructed within 0.25 mi of a lek.

Site-specific surveys for T&E, candidate, and special status species would be conducted during on-site investigations associated with each APD and/or ROW application. Where species or their habitats are encountered, additional avoidance and/or protection measures may be applied.

The *Clean Air Act* would be complied with through the State of Wyoming's permitting process. It is expected that mitigating measures would be used to reduce emissions, thereby avoiding adverse impacts in Class I areas.

The BLM is currently reviewing the RFD scenario in the GDRA RMP/EIS. In addition to the RFD for oil and gas exploration and development activities, the BLM is also reviewing the reasonably foreseeable activities or actions involving other land use and resource management programs, like recreation, livestock grazing, wildlife habitat, etc. There may be direct or interrelated cause-and-effect relationships (other than just those related to oil and gas actions) among all of these activities or actions that could require amending RMP decisions.

The BLM is also initiating talks with other known regional oil and gas Operators, to determine their drilling plans (outside the CD/WIIPA) for the next couple of years. Based on the results of these discussions and the review of the RMP-identified RFD scenarios, the BLM will decide when to initiate a new EIS effort for additional project proposals. If the anticipated level of activity(ies) covered by the GDRA RMP/EIS is likely to be exceeded by any one or more of these additional project proposals within the next few years, the RFD scenario(s) for the RMP/EIS will be updated. Analysis and evaluation of the updated RFD, in conjunction with the RMP, may lead to the amendment of some RMP decisions.

The ultimate solution for updating the RFD scenarios in the GDRA RMP/EIS is to include all existing and projected oil and gas exploration and development activities in the GDRA. When an updated RFD scenario is established, analysis and evaluation would be conducted to determine whether modifications to the RMP/EIS are necessary. The RFD update could result in a requirement to amend one or more RMP decisions. However, this cannot be determined until the RFD update is prepared and evaluated.

Based on monitoring data collected during the past 10+ years, some of the analysis assumptions for RFD presented in the GDRA RMP/EIS reflect erroneously excessive surface disturbance effects related to oil and gas activities which may need to be revised. Cumulative impacts would include the impacts identified in all previous NEPA documents and the reasonably foreseeable projects in the GDRA.

All proposed land and resource use and management actions must conform with RMP decisions. In the absence of conformance, actions must either be denied or modified so they do conform or the RMP decisions must be changed. Therefore, the ROD for this project may authorize no more than 1,655 wells (i.e., 415 fewer wells than proposed) within the GDRA (Rawlins Field Office). Changes to RMP decisions are made through established procedures that involve public notice, public input, and formal decision-making. These procedures are contained in the BLM 1617 Manual. Proposals analyzed in NEPA documents (EAs or EISs) are reviewed for conformance with RMP decisions. Project- or site-specific NEPA documents are tiered to RMP/EISs. The resulting decisions for proposals analyzed in project-specific NEPA documents can result in the need to change or amend RMP decisions. That is, if a project-specific EA or EIS decision does not conform with the specific RMP, part of the decision for the project would include the needed change(s) to the RMP decision(s). If the potential for amending the RMP is identified, planning process requirements are incorporated into the project-specific NEPA process. If this potential is not determined early in the NEPA process, project delays may result due to the additional planning requirements necessary for a *Federal Register* Notice of Intent to conduct a planning review of (or to amend) the RMP and for the required time frames for public notice and comment."

Page 2-3, Map 2.2. In the map legend change the name "Bruin" to "De Bruin".

2.2 ALTERNATIVE A - 14-ACRE MAXIMUM SURFACE DISTURBANCE PER FEDERALLY MANAGED SECTION IN SRAS

Page 2-5, column 1, paragraph 1, line 9. Change "27%" to "47%".

Page 2-5, column 1, paragraph 3, line 3. After the word "scoping" add "and review of the DEIS".

Page 2-5, column 1, paragraph 3, line 6. After the word "areas," insert "probable sage grouse nesting areas (i.e., areas within 2.0 mi of sage grouse leks),".

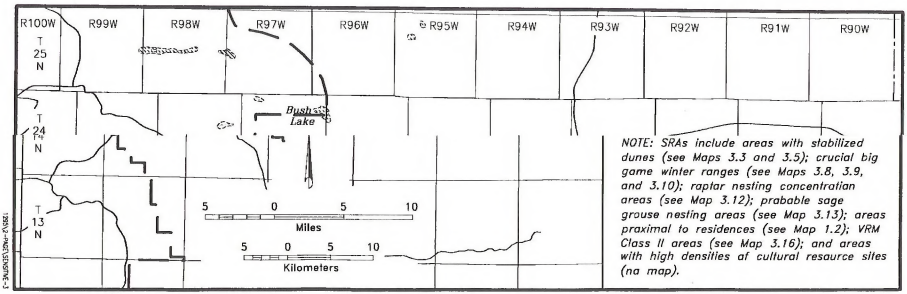
Page 2-5, column 2, paragraph 1, line 2. After the word "concentration" insert "and probable sage grouse nesting".

Page 2-7, Map 2.3. Delete Map 2.3 and replace with revised Map 2.3.

Page 2-8, column 1, paragraph 1, line 22. After the word "developed" add "by BLM".

2.4 NO ACTION

Page 2-10, column 1, paragraph 2, line 13. Change the word "than" to "then".



Map 2.3 Sensi, Wyoming, 1999.

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2.6.13.9 Wildlife and Fisheries

Page 2-34, column 2, item 15, line 3. After the word "lakes" add ", areas with vegetation <4 inches in height".

Page 2-35, column 1, bullet 3. Delete the entire text of the bulleted item and replace with:

"• Surveys would be required by the BLM to clear an action for mountain plovers prior to beginning a planned activity, and surveys would be conducted during the period of April 15-June 30 for development activities planned during this period."

Page 2-35, column 1, bullet 6. After bullet 6 insert a new bulleted item as follows:

"• Where access roads and/or well locations have been constructed prior to the mountain plover nesting season and use of these areas has not been initiated for development actions, the BLM would require site investigations of these disturbed areas prior to use to determine whether mountain plover are present. In the event mountain plover nesting is occurring, the BLM may require delays in development activities until nesting is complete."

Page 2-35, column 1, item 16, lines 1 and 2. Delete the phrase "Operators would consult with the USFWS and/or BLM" and replace with "Where prairie dog colonies would be disturbed, Operators would consult with the USFWS and/or the BLM and BLM would initiate informal consultation with the USFWS".

Page 2-38, Table 2.6, Air Quality, row 2, column 2, line 5. Replace the phrase "(at 1.68 deciview)" with "(at 1.69 deciview)".

Page 2-38, Table 2.6, Air Quality, row 3, column 2, lines 5 through 9. Replace the phrase "(at 1.68 deciview) and 1 day above Savage Run PSD Class II Wilderness Area background levels (at 0.67 deciview)" with "(at 1.69 deciview) and 1 day above Savage Run federal PSD Class II/Wyoming PSD Class I Wilderness Area background levels (at 0.69 deciview)".

Page 2-39, Table 2.6, Minerals/Gas and Oil, all columns. Insert a new row that includes the following impacts and mitigation "Exceedance of RMP-identified reasonably foreseeable development estimates; Significant - exceedance of estimates on the GDRA could lead to impacts that are unidentified in the RMP; Same as Proposed Action; Same as Proposed Action; No impact above existing allowable levels; The BLM would not authorize actions that exceed the RMP-identified reasonably foreseeable development estimates."

Page 2-47, Table 2.6, Wildlife, row 3, columns 2 and 6. In column 2 (Proposed Action) delete the word "Insignificant" and insert the word "Significant". In column 6 (Mitigations) after the word "breeding" insert "(0.25-mi buffer)", after the word "nesting" insert "(2.0-mi buffer)", and delete parenthetical clause "(0.25-mi buffer)".

Page 2-54, Table 2.6, Visual Resources, row 1, columns 2, 3, and 4. In column 2 (Proposed Action), line 4, delete "; insignificant" and replace with "and in any undeveloped area where the landscape character is changed to an active oil and gas field; generally insignificant"; in column 3 (Alternative A), line 1, delete "Insignificant" and replace with "Significant in undeveloped areas that are changed to active oil and gas fields; generally insignificant in VRM Class II areas"; and in column 4 (Alternative B), line 1, delete "Insignificant" and replace with "Significant in undeveloped areas that are changed to active oil and gas fields; generally insignificant in VRM Class II areas".

3.0 AFFECTED ENVIRONMENT

Page 3-2, Table 3.1. Insert the following element, its status, and whether it is addressed in the EIS, "Invasive, non-native species; Potentially affected; Yes" and on line 9 after the words "Water quality" insert "(surface and ground)".

3.1.2 Air Quality

Page 3-6, column 1, paragraph 3, lines 5 and 7. On line 5 replace the phrase "both the ozone and" with the word "the" and on line 7 replace the word "these" with the word "the".

Page 3-6, column 2, paragraph 1, lines 7 and 12. On line 7 delete the phrase "and Savage Run" and change the word "Areas" to "Area" and on line 12 after "(Map 3.1)" insert a new sentence that reads: "The Savage Run Wilderness Area is a federal PSD Class II and State of Wyoming PSD Class I area."

Page 3-7, Map 3.1, legend, item 5. Replace the phrase "SAVAGE RUN PSD CLASS II WILDERNESS AREA" with "SAVAGE RUN FEDERAL PSD CLASS II/WYOMING PSD CLASS I WILDERNESS AREA".

Page 3-8, column 1, paragraph 1. After the paragraph insert a new paragraph that reads:

> "There are no applicable Hazardous Air Pollutant, visibility impairment, or atmospheric deposition (acid rain) standards. The visibility impairment regulations for both "reasonably

attributable" and "regional haze" impacts apply only within mandatory federal PSD Class I areas."

Page 3-8, column 1, paragraph 2, line 16. Replace the acronym "Ph" with "pH".

Page 3-9, Table 3.6, lines 6, 7, and 8. Replace all ozone information with "Ozone[5], 8-hr, 117[6], 160, n/a, n/a".

3.1.4.1 Mineral Resources

Page 3-11, column 1, paragraph 3, lines 7 and 10. Change the acronym "mbo" to "mmbo".

Page 3-11, column 2, paragraph 2, line 2. Change the acronym "mbo" to "mmbo".

Page 3-13, Table 3.7, column 7, header and footnote 3. Change the acronym "mbo" to "mmbo".

3.1.4.2 Geologic Hazards

Page 3-17, column 1, paragraph 4, lines 6 and 7. Delete the name "North Granite Mountain/Green Mountain segment" and replace with "South Granite Mountain fault system".

3.2.2 Wildlife and Fisheries

Page 3-37, column 1, paragraph 3, line 9. Before the number "29.3%" insert the word "Approximately" and delete "[words?]".

Page 3-39, Table 3.14, Sage Grouse, row 1, column 2, and row 2, columns 2 and 3. In row 1, column 2, change "7,000" to "7,200"; in row 2, column 2, change "340,200" to "345,500"; and in row 2, column 3, change "32.1" to "32.6".

3.2.2.1 Big Game

Page 3-40, column 2, paragraph 4, lines 15 and 16. On line 15 replace the words "unsuitable as" with the word "unoccupied" and on line 16 replace "Map 3.8" with "Map 3.9".

Page 3-42, column 1, paragraph 1, lines 15 and 17. On line 15 before the word "mule" insert "adult", and on line 17 insert a new sentence that reads: "However, woven wire fences, which are common in the CD/WIIPA, can limit the movements of and be life-threatening to fawns, especially in pastures without reliable summer water sources and during early fall storms when fawns are too small to jump fences."

Page 3-42, column 2, paragraph 1, lines 2 and 5. On line 2 before the acronym "WGFD" insert the year "1997", and on line 5 after "(Table 3.13)" insert a new clause that reads "; however, the expected population objective for the herd unit is 250-350 animals".

Page 3-42, column 2, paragraph 2, lines 2, 4, 6, and 10. On line 2 delete "unsuitable as", on line 4 delete "not suitable", on line 6 delete "devoid of elk", on line 10 delete "unsuitable as", and in all four locations insert the word "unoccupied".

3.2.2.4 Upland Game Birds

Page 3-47, column 1, paragraph 4, lines 1, 3, and 10-13. On line 1 replace the number "Sixty-five" with "Sixty-six", on line 3 replace "Fifty-one (78.5%)" with "Fifty-two (78.8%)", and delete the sentence on lines 10-13 and replace it with "WGFD data indicate that at least 32 of the 66 known leks on the area (48%) have been active for at least one year during the period of 1995 through 1998."

Page 3-47, column 2, paragraph 2, lines 1, 5, 7, 10, and 14. On line 1 replace the number "Fifty-six" with "Fifty-seven", on line 5 replace "7,000" with "7,200", on line 7 replace "54%" with "56%", on line 10 replace "32%" with "30%", an on line 14 replace "340,200" and "32.1%" with "345,500" and "32.6%", respectively.

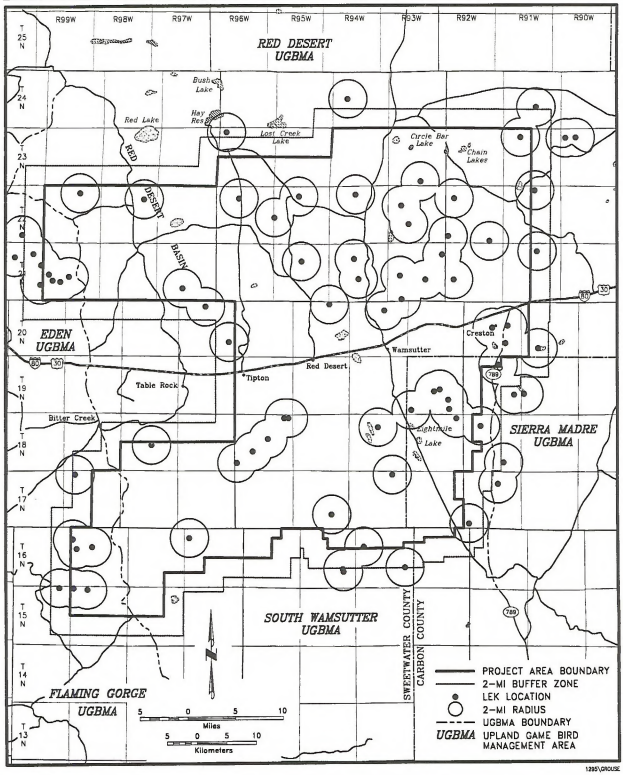
Page 3-48, Map 3.13. Delete Map 3.13 and replace with the following revised map.

Page 3-49, column 1, paragraph 2, line 6. After the bird "killdeer," insert "white-faced ibis,".

4.0 ENVIRONMENTAL CONSEQUENCES, MITIGATION, AND MONITORING

4.1.1 Air Quality

Page 4-8, column 2, paragraph 2, lines 4 and 6. On line 4 after the word "a" insert the word "revised" and on line 6 replace the reference "(BLM 1999b)" with "(BLM 1999d)".



Map 3.13 Sage Grouse Lek Sites and Upland Game Bird Management Areas, Continental Divide/Wamsutter II Natural Gas Project, Sweetwater and Carbon Counties, Wyoming, 1999.

4.1.1.1 Proposed Action

Page 4-9, column 2, paragraph 4, line 3. After the word "gas" insert the word "typically".

Page 4-10, column 1, paragraph 2, line 4. Replace the phrase "would be nearly 124 $\mu g/m^3$ (24-hr TSP), 55 $\mu g/m^{3n}$ with "would be just below 150 $\mu g/m^3$ (24-hr TSP), 67 $\mu g/m^{3n}$.

Page 4-11, column 1, paragraph 2, lines 4, 6, 7, 8, and 12. On line 4 replace the phrase "(nearly 34 $\mu g/m^3$)" with "(nearly 35 $\mu g/m^3$)"; on lines 6 and 7 replace the phrase "would be 151 $\mu g/m^3$, which is below the restrictive ozone WAAQS of 160 $\mu g/m^{3n}$ with "would be 152 $\mu g/m^3$, which is below the 8-hour ozone WAAQS and NAAQS of 160 $\mu g/m^{3n}$; on lines 7 and 8 delete the sentence "The ozone NAAQS is less stringent."; and on line 12 after the word "Wyoming" insert the following: ", and it is unlikely the maximum 1-hour predicted ozone impact would occur for a consecutive 8-hour period."

Page 4-11, column 2, paragraph 2, line 6. Replace "0.4 x 10^{-6} and 0.4 x 10^{-6} individually" with "0.5 x 10^{-6} and 0.4 x 10^{-6} individually".

Page 4-12, Table 4.3, column 2, lines 2 through 7. Replace the entire individual well emission, modeled 8-hr concentration items for all pollutants as follows: "279.6, 260.9, 14.9, 356.9, 1,382.4, n/a".

Page 4-12, Table 4.3, columns 2 and 3, last line. Replace the entire gas plant/compression emissions, modeled 8-hr concentration and range of state AACL for formaldehyde as follows: "70.8 4.5_{FL07} - 71_{NV01}".

Page 4-13, column 1, paragraph 6, line 4. Replace the word "project-wide" with "air pollutant emission source".

4.1.1.5 Mitigation and Monitoring

Page 4-14, column 2, paragraph 1, line 3. After the phrase "emission rate of 1-5 g/hp-hr." insert a new sentence that reads: "The cost effectiveness of this control technology applied to a 2,500- to 4,000-hp rich-burn engine ranges from $315 to $395 per ton of NO_x removed."

Page 4-14, column 2, bullet 1 (Lean Combustion), line 7. After the phrase "emission rate of 1.5-4.0 g/hp-hr." insert a new sentence that reads: "The cost effectiveness of this control technology applied to a 2,500- to 4,000-hp rich-burn engine ranges from $480 to $500 per ton of NO_x removed."

Page 4-14, column 2, bullet 2 (Selective Catalytic Reduction), line 7. After the phrase "of 1.0-2.5 g/hp-hr." insert a new sentence that reads: "The cost effectiveness of this control technology applied to a 2,500- to 4,000-hp rich-burn engine ranges from $700 to $890 per ton of NO_x removed."

Page 4-14, column 2, bullet 3 (Electric Compression), line 10. After the phrase "coal-fired power plants)." insert a new sentence that reads: "Using current industrial electrical rates and assuming 100% control due to elimination of the 2.0 g/hp-hr NO_x emissions at the compressor site, the cost effectiveness of electric compression is roughly $26,000 per ton of compression NO_x removed."

Page 4-14, column 2, paragraph 5. After the fourth paragraph insert a new bullet item that reads:

"• Fuel Cell Technology. It is not currently feasible to connect enough fuel cells together to generate the compression horsepower necessary for the project. Approximately 75 fuel cells (at a capital cost of nearly $30 million) would be required to provide 20,000 hp of compression. In addition, current technology allows only two fuel cells to be connected in a series, and as of January 1998, there were only 160 of these units operating worldwide. The cost effectiveness of this control technology ranges from $20,000 to $40,000 per ton of NO_x removed."

Page 4-16, column 1, paragraph 3, lines 1, 2, and 15. On lines 1 and 2 replace the sentence "The BLM, in cooperation with WDEQ-AQD, could continue to track total NO_x emissions." with "In addition to sources located within the Rock Springs Field Office Area, the BLM, in cooperation with WDEQ-AQD, could track total NO_x emissions from additional CD/WIIPA sources located outside the area."; and after the paragraph insert a new paragraph that reads:

"Proposed CD/WIIPA NO_x emitting sources located within the Rock Springs Field Office Area are subject to the existing agreement. However, most of the proposed CD/WIIPA sources would be located outside the area. Therefore, either a mutually acceptable revision or a separate agreement would be required to track NO_x emission sources not subject to the current agreement."

4.1.1.6 Cumulative Impacts

Page 4-16, column 2, paragraph 1, lines 1 and 3. On line 1 after the word "a" insert the word "revised" and on line 3 replace the date "1999b" with "1999d".

Page 4-17, Table 4.4. Replace the entire table with the following revised table (see following page):

Page 4-18, Table 4.5. Replace the entire table with the following revised table (see following page):

Table 4.4 Predicted Direct Project NO_2 PSD Class I and II Sensitive Receptor Impacts, Continental Divide/Wamsutter II Natural Gas Project, Sweetwater and Carbon Counties, Wyoming, 1999.[1]

Location	Direct Project Sources	PSD Increment
PSD Class I Sensitive Areas		
Bridger Wilderness	0.001	2.5
Fitzpatrick Wilderness	<0.001	2.5
Mount Zirkel Wilderness	0.01	2.5
Rawah Wilderness	0.005	2.5
PSD Class II Sensitive Areas		
Adjacent to CD/WIIPA	21.2	25
Adjacent to South Baggs Project	1.8	25
Dinosaur National Monument	0.009	25
Popo Agie Wilderness	0.001	25
Wind River Roadless Area	<0.001	25
Federal PSD Class II/Wyoming PSD Class I Sensitive Area		
Savage Run Wilderness Area	0.008	25/2.5

[1] Measured as $\mu g/m^3$ (annual average).

Table 4.5 Predicted Change in Acid Neutralizing Capacity in PSD Class I and II Sensitive Lakes (Percent Change), Continental Divide/Wamsutter II Natural Gas Project, Sweetwater and Carbon Counties, Wyoming, 1999.

Location	Minimum ANC ($\mu eq/l$)	Project Sources	Cumulative Sources	Thresholds
PSD Class I Sensitive Areas				
Bridger Wilderness				
Deep Lake (2.7-year turnover)	49.0	0.1	1.4	10
Mount Zirkel Wilderness				
Pothole A-8	14.2	0.3	1.5	7.0[1]
Seven Lakes	30.0	0.2	1.0	10
Upper Slide Lake	22.6	0.2	1.0	4.4[1]
Rawah Wilderness				
Island Lake	64.6	<0.1	0.4	10
No. 4 Lake	43.5	0.1	0.6	10
PSD Class II Sensitive Areas				
Medicine Bow National Forest				
West Glacier Lake	29.7	0.4	4.6	10
Popo Agie Wilderness				
Lower Saddlebag Lake	58.3	<0.1	0.5	10

[1] For lakes with minimum existing ANC values <25 $\mu eq/l$, the threshold of concern is less than a 1 $\mu eq/l$ reduction below the minimum existing ANC value (e.g., for Pothole A-8 in the PSD Class I Mount Zirkel Wilderness Area, 0.070 x 14.2 $\mu eq/l$ equals 1 $\mu eq/l$).

Page 4-19, column 1, paragraph 4, line 10. Replace "(1.68 deciview)" with "(1.69 deciview)".

Page 4-19, column 2, paragraph 1, lines 1 and 2. Replace the phrase "the PSD Class II Savage Run Wilderness Area (0.67 deciview)" with "the federal PSD Class II/Wyoming PSD Class I Savage Run Wilderness Area (0.69 deciview)".

Page 4-19, column 2, bullet 1, lines 4 through 6. Replace the phrase "Recently, NO_x emissions from existing sources in southwestern Wyoming have been decreasing." with "A reduction of NO_x emissions from existing sources in southwestern Wyoming is anticipated, primarily due to installation of control devices on the Naughton coal-fired electrical generation facility."

Page 4-20, Table 4.6, lines 9 and 10. On line 9 delete all existing "Savage Run Wilderness" items, and after line 10 insert the following: "Federal PSD Class II/Wyoming PSD Class I Sensitive Receptor, Savage Run Wilderness Area, 0, 0, 0".

Page 4-21, column 2, paragraph 1, lines 6 through 8. Replace the sentence "A similar conclusion has been reached by the Southwest Wyoming Technical Air Forum." with "The Southwest Wyoming Technical Air Forum is developing a secondary organic aerosol model, but it is not currently available for use."

Page 4-21, column 2, paragraph 3, line 4. Replace the word "project-wide" with "air pollutant emission source".

4.1.2.2 Alternative A

Page 4-24, column 1, paragraph 1, line 5. Change "27%" to "47%".

4.1.3 Mineral Resources

Page 4-26, column 1, paragraph 2. Delete the entire paragraph and insert the following revised paragraph:

> "The following analysis shows that the Proposed Action and development alternatives are generally compatible with these management objectives; however, significant impacts would occur under the Proposed Action due to the extraction of oil and gas reserves and their subsequent unavailability for future generations. Significant impacts also could occur if development within the RFO area exceeds the estimates provided in the GDRA RMP (see Section 1.2.4). Furthermore, under the No Action Alternative, if development is denied, significant adverse impacts could occur due to the violation of leaseholders' rights."

4.1.3.1 Proposed Action

Page 4-26, column 1, paragraph 3, line 5. Change the acronym "mbo" to "mmbo".

Page 4-26, column 1, paragraph 3. After the paragraph insert a new paragraph that reads:

> "Since the proposed development in the RFO area exceeds the reasonably foreseeable development estimates presented in the GDRA RMP, significant impacts (i.e., impacts not accounted for during GDRA planning) could occur. However, the proposed development is scheduled to occur over the next 20 years, and the BLM will be initiating a RFO area land use plan review and possible amendment prior to reaching the reasonably foreseeable disturbance estimates made in the RMP. Furthermore, the BLM will not authorize development actions (APDs, ROWs) that exceed current reasonably foreseeable disturbance estimates prior to the plan review and possible amendment."

4.1.3.5 Mitigation and Monitoring

Page 4-27, column 1, paragraph 4. Prior to paragraph 4 insert a new paragraph that reads:

> "The BLM would not authorize development beyond the reasonably foreseeable development estimates specified in the GDRA RMP (see Section 1.2.4). The BLM will initiate a plan review and possible amendment for the RFO area prior to reaching the reasonably foreseeable development estimates contained in the GDRA RMP."

4.1.7.5 Mitigation and Monitoring

Page 4-38, column 1, paragraph 2, bullet 1. After the word "fluids" insert "(i.e., moderately to highly permeable soils)".

Page 4-38, column 2, paragraph 4. After the paragraph insert a new paragraph that reads:

> "The BLM may require the establishment of an adaptive environmental management program for surface water resources. The plan would involve BLM, Operators, landowners, permittees, and other area users and entities with an interest in participation. The plan would call for the establishment and review of monitoring procedures and results to determine their efficacy, and in the event significant impacts are found the plan may call for the modification of existing surface water mitigations."

4.2.3 Wildlife and Fisheries

Page 4-47, column 2, paragraph 2, line 6. After the word "failure" insert "and/or loss of sage grouse productivity".

4.2.3.2 Birds

Page 4-59, column 1, paragraph 4, lines 3, 5, and 14. On line 3 replace the number "340,200" with "345,500", on line 5 replace "(Table 4.12)" with "(see Table 3.14)", and on line 14 replace "7,000" with "7,200".

Page 4-59, column 2, paragraph 1, lines 1-6. Delete the entire sentence.

Page 4-59, column 2, paragraph 2, lines 5-11. Delete the entire sentence and replace with "Furthermore, with the implementation of the Wildlife Protection Plan for this project and associated monitoring and potential implementation of augmented protection measures (see Appendix D), most impacts to sage grouse associated with the Proposed Action are expected to be less than significant. However, regional sage grouse populations have apparently been declining over the last several years, and these declines have been attributed to a number of factors including climate, predation, livestock grazing, and mineral development. Therefore, significant impacts to sage grouse productivity could occur under implementation of the Proposed Action."

Page 4-59, column 2, paragraph 4, lines 1, 4, 8, and 9. On line 1 delete "to sage grouse and other" and replace with "most"; on line 4 after the word "raptors" insert "and sage grouse"; on line 8 after the word "areas" insert "and 2.0-mi sage grouse nesting buffers" and after "Maps 2.3" insert *, 3.13"; and on line 9 after the word "raptors" insert ", sage grouse,".

Page 4-60, Table 4.12, column 1. Delete "571,000", "31,000", 1,466,500", and "91,200" and replace with "576,300", "31,100", "1,471,800", and "91,300", respectively.

Page 4-61, column 1, paragraph 1, lines 1, 4, 7, and 9. On line 1 delete "to sage grouse and other" and replace with "most"; on line 4 after the word "raptors" insert "and sage grouse"; on line 7 after the word "raptors" insert "and sage grouse"; and on line 9 after the word "raptors" insert ", sage grouse,".

Page 4-62, column 1, paragraph 2, line 1. Before the word "Unless" insert a new sentence that reads: "While no power lines are currently proposed, if they do become necessary, the BLM would prohibit Operators from building power lines within 0.6 mi of sage grouse leks, pursuant to the Wildlife Protection Plan (see Appendix D)."

Page 4-62, column 1, paragraph 2. After paragraph 2 insert a new paragraph that reads: "The BLM may require that permanent caps placed on abandoned wells be less than 1.0 m tall. This measure would limit the suitability of these caps as hunting perches for raptors and corvids (e.g., crows and ravens)."

Page 4-62, column 2, paragraph 3, lines 9, 11, 14, and 16. On line 9 after the word "raptor" insert "and sage grouse"; on line 11 after the word "raptor" insert "or sage grouse"; on line 14 after the word "nests" insert "and sage grouse leks and probable nesting areas"; and on line 16 after the word "raptor" insert "and sage grouse".

Page 4-64, Map 4.7. Delete Map 4.7 and replace with the following revised map.

4.2.5.5 Mitigation and Monitoring

Page 4-71, column 2, bullet 3, line 2. After the word "lakes" insert ", areas with vegetation <4 inches in height".

Page 4-72, column 1, dash 1. Delete the entire text of the dash and replace with:

"- Surveys would be required by the BLM to clear an action for mountain plovers prior to beginning a planned activity, and surveys would be conducted during the period of April 15-June 30 for development activities planned during this period."

Page 4-72, column 1, dash 4. After dash 4 insert a new dashed item as follows:

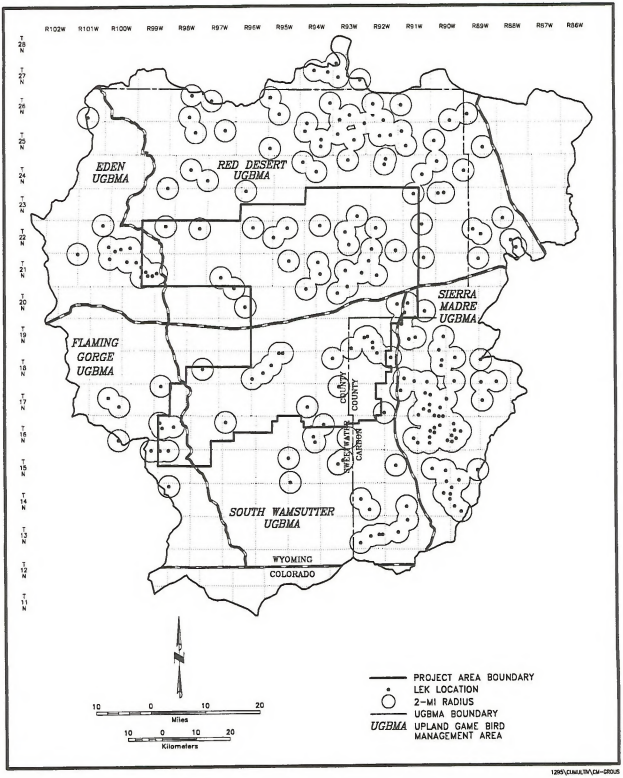
"- Where access roads and/or well locations have been constructed prior to the mountain plover nesting season and use of these areas has not been initiated for development actions, the BLM would require site investigations of these disturbed areas prior to use to determine whether mountain plover are present. In the event mountain plover nesting is occurring, the BLM may require delays in development activities until nesting is complete."

Page 4-72, column 1, bullet 1, lines 1 and 2. Delete the phrase "Operators would consult with the USFWS and/or BLM" and replace with "Where prairie dog colonies would be disturbed, Operators would consult with the USFWS and/or the BLM and BLM would initiate informal consultation with the USFWS".

Page 4-72, column 2, paragraph 3. After paragraph 3 insert a new paragraph that reads:

"To further protect mountain plover, the BLM may require presence/absence surveys consistent with current USFWS protocol. Survey methods may be as follows:

- conduct surveys during early courtship and territory establishment (i.e., May 1 through June 15);
- conduct surveys from sunrise to 10:00 a.m. and/or from 5:30 p.m. to sunset;
- preferably conduct surveys from four-wheel drive vehicles or, where access is a problem and/or no visual observations are made from vehicles, use ATVs.



Map 4.7 Regional Sage Grouse Leks, Continental Divide/Wamsutter II Natural Gas Project, Sweetwater and Carbon Counties, Wyoming, 1999.

- remain in or close to the vehicle when scanning with binoculars;
- visual observations would be made of all areas within 200 m of proposed disturbance sites;
- sites would be surveyed three times during the survey window with each survey separated by at least 14 days;
- do not conduct surveys in poor weather;
- focus surveys on identifying displaying or calling males;
- if breeding birds are observed, conduct additional surveys immediately prior to construction to search for active nest sites;
- if an active nest is located, establish a 200-m buffer zone around nest to prevent direct and indirect nest disturbance;
- project initiation would occur as near to completion of the survey as possible; and
- if an active nest is found in the survey area, planned activities would be delayed 37 days, or 1 week post-hatching, or if a brood of flightless chicks is observed, activities would be delayed at least 7 days.

Furthermore, prior to authorizing surface disturbance within 200 m of known mountain plover concentration areas (i.e., areas where broods and/or adults have been observed in the current year or documented in at least 2 of the last 3 years), regardless of the season, the BLM may initiate informal conferencing with the USFWS."

4.4.1 Proposed Action

Page 4-78, Table 4.15. Replace Table 4.15 with the following revised table (see following page).

Page 4-79, column 1, paragraph 2, lines 7, 8, 9, and 11. On line 7 replace the number "411" with "53"; on line 8 replace the number "$14" with "$6.6" and after "(Table 4.15)." insert a new sentence that reads "Some additional revenues would also be generated from the production of approximately 80 million bbl of natural gas liquids."; on line 9 replace the number "$865" with "$396"; and on line 11 replace the number "$1.8" with "$0.8".

4.5.1.2 Recreation

Page 4-82, column 2, paragraph 3, line 8. After the word "area" insert "(a potentially significant impact, see Section 4.6),".

4.6 AESTHETICS AND VISUAL RESOURCES

Page 4-90, column 1, paragraph 2, lines 4 and 5. On line 4 after the word "areas" insert "under the Proposed Action" and on line 5 after the word "pattern" insert "and under any alternative where the landscape character (aesthetics) is changed from undeveloped to an active oil and gas field".

Table 4.15 Estimated Gas and Condensate Production, State and Local Severance Taxes, and Federal Royalties for the First 25 Years of Operation, Continental Divide/Wamsutter II Natural Gas Project, Sweetwater and Carbon Counties, Wyoming, 1999.

Year	Gas Production (mmcfx1,000)[1]	Gas Price ($/mcf)[2]	Condensate Production (mbblx1,000)[3]	Condensate Price ($/bbl)[2]	State and Local Taxes ($x1,000,000)[4]	Federal Royalty ($x1,000,000)[5]
1999	50	1.96	1	20.27	16	7
2000	150	1.97	3	20.37	48	22
2001	250	1.98	5	20.47	80	37
2002	300	1.99	6	20.58	96	45
2003	350	2.00	7	20.69	113	53
2004	300	2.01	6	20.78	97	45
2005	250	2.02	5	20.89	81	38
2006	200	2.03	4	20.99	65	31
2007	150	2.04	3	21.10	49	23
2008	100	2.05	2	21.20	33	15
2009	90	2.06	2	21.31	30	14
2010	80	2.07	2	21.41	28	13
2011	70	2.08	1	21.52	22	10
2012	60	2.09	1	21.63	20	9
2013	50	2.10	1	21.74	17	8
2014	40	2.11	1	21.84	14	7
2015	30	2.12	1	21.95	11	5
2016	20	2.13	0	22.06	6	3
2017	15	2.14	0	22.17	4	2
2018	10	2.15	1	22.28	6	3
2019	5	2.17	0	22.40	1	1
2020	5	2.18	0	22.51	1	1
2021	5	2.19	0	22.62	1	1
2022	4	2.20	0	22.73	1	1
2023	3	2.21	0	22.85	1	0
2024	2	2.22	1	22.96	4	2
Ave.	--	2.09	--	21.59	--	--
Total	2,589	--	53	--	845	396

1 mmcf = million cubic feet.

2 Gas and condensate prices are based on the average 1997 prices escalated at a 0.5% annual rate through 2024; $/mcf = price per thousand cubic feet; $/bbl = price per barrel.

3 mbbl = thousand barrels.

4 State and local taxes are assumed to be a 6.0015% and 7.34%, respectively, on all revenue.

5 Based on 1,500 wells on federal lands with a 12.5% royalty interest.

4.6.1 Proposed Action

Page 4-90, column 1, paragraph 3, line 12. Add a new sentence that reads "Furthermore, a significant impact could occur in any area where the landscape character is changed from undeveloped to an active oil and gas field."

4.6.2 Alternative A

Page 4-90, column 2, paragraph 3, line 11. After "Alternative A" insert "; however, where currently undeveloped areas are utilized for oil and gas operations, a significant impact to landscape character could occur."

4.6.3 Alternative B

Page 4-90, column 2, paragraph 4, line 11. After "Alternative B" insert "; however, where currently undeveloped areas are utilized for oil and gas operations, a significant impact to landscape character could occur."

4.6.6 Cumulative Impacts

Page 4-92, column 2, paragraph 3, line 7. Add a new sentence that reads "Furthermore, a significant impact could occur in any area where the landscape character is changed from undeveloped to an active oil and gas field."

5.0 CONSULTATION AND PREPARERS

Page 5-8, Table 5.1, column 3, line 9 and column 2, line 10. In the third column, line 9, before the word "State" insert "Past", and in the second column, line 10, replace the name "Larsen" with "Hallberg".

6.0 REFERENCES

Page 6-1, column 1. Above the reference "Allen, J.M. 1980." insert the reference:

"Air Resource Specialists, Inc. n.d. Standard operating procedures and technical instructions for transmissometer systems. Fort Collins, Colorado."

Page 6-4, column 2. Above the reference "Bureau of Land Management. 1999a." insert the reference:

"Bureau of Land Management. 1998e. Final air quality impact assessment protocol - Continental Divide/Greater Wamsutter II and South Baggs Projects. U.S. Department of the Interior, Bureau of Land Management, Rawlins District Office. Rawlins, Wyoming. September 28, 1998."

Page 6-4, column 2. After the reference "Bureau of Land Management. 1999b." insert the references:

"Bureau of Land Management. 1999c. Pinedale Anticline Oil and Gas Exploration and Development Project: Air quality assessment protocol. U.S. Department of Interior, Bureau of Land Management, Pinedale Field Office. Pinedale, Wyoming. June 1999.

Bureau of Land Management. 1999d. Revised air quality impact assessment technical support document, Continental Divide/Wamsutter II and South Baggs Projects. U.S. Department of the Interior, Bureau of Land Management, Rawlins and Rock Springs Field Offices. Rawlins and Rock Springs, Wyoming. September 1999."

Page 6-6, column 1. Above the reference "Dorn, R.D. 1992." insert the reference

"De Bruin, R.H., and C.S. Boyd. 1991. Oil and Gas Map of Wyoming. Geological Survey of Wyoming. Map."

Page 6-6, column 1. After the reference "Environmental Studies Board. 1974." insert the reference:

"Environmental Protection Agency. 1979. Protecting visibility - An EPA report to Congress. EPA-450/5-79-008. Office of Air Quality Planning and Standards. Research Triangle Park, North Carolina. October 1979."

Page 6-6, column 1. After the reference "Environmental Protection Agency. 1997b." insert the references:

"Environmental Protection Agency. 1998. Interagency Workgroup on Air Quality Modeling (IWAQM) phase 2 summary report and recommendations for modeling long range transport impacts. EPA-454/R-98-019. Office of Air Quality Planning and Standards, Research Triangle Park, NC. December 1998.

Environmental Protection Agency. 1999. Visibility monitoring guidance. EPA-454/R-99-003. Office of Air Quality Planning and Standards. Research Triangle Park, North Carolina. June 1999."

Page 6-8, column 2. After the reference "Kuck et al. 1985." insert the references:

"Landres, P., and S. Meyer. 1998. A national wilderness preservation system database: Key attributes and trends, 1964-1998. General Technical Report INT-GTR-18. http://www.wilderness.net/nwps/db/ U.S. Forest Service, Rocky Mountain Research Station. Odgen, Utah."

Page 6-8, column 2. Above the reference for "Lyon, L.J., and A.L. Ward" insert the following reference:

"Lyon, A.G., and S.H. Anderson. 1998. Effect of Gas Development on Sage Grouse Populations, 1998 Field Season Findings. Wyoming Cooperative Fish and Wildlife Research Unit, University of Wyoming. Laramie, Wyoming."

Page 6-9, column 2. After the reference to "Murray et al. 1995." insert the references:

"National Acid Precipitation Assessment Program. 1991. Acid deposition: State of science and technology: report 24 - visibility: existing and historical conditions - causes and effects. U.S. National Acid Precipitation Assessment Program, Office of the Director, Washington, D.C.

National Park Service. 1999. Federal land managers' air quality related values workgroup (FLAG): Draft phase I Report. Air Quality Division. Denver, Colorado. May 4, 1999."

Page 6-9, column 2. After the reference "Olendorff et al. 1981." insert the reference:

"Olson, D. 1998. Memorandum to J. Scire, Earth Tech, Inc. regarding the release of SWWYTAF MM5 data to the Bureau of Land Management dated December 15, 1998. State of Wyoming, Department of Environmental Quality, Air Quality Division. Cheyenne, Wyoming."

Page 6-12, column 2. After the reference "University of Wyoming. 1996." insert the reference:

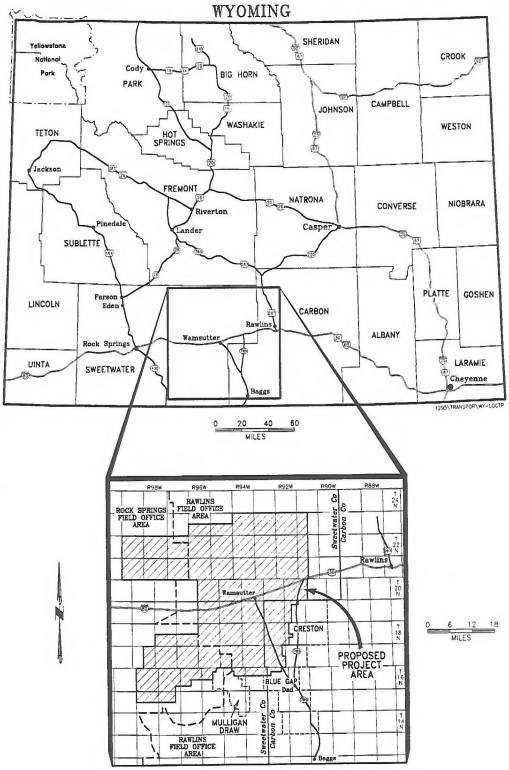
"U.S. Department of Agricultural - Natural Resource Conservation Service. 1998. PRISM data set (available on compact disk or at http://www.ftw.nrcs.usda.gov/prism/prism.html). Natural Resources Conservation Service, National Water and Climate Center, Portland, Oregon."

Page 6-13, column 2. After the reference "Wasser and Shoemaker. 1982." insert the reference:

"Watson, J.G., et al. 1996. Mt. Zirkel Wilderness Area: Reasonable Attribution Study of Visibility Impairment. Prepared for the Technical Steering Committee, c/o Colorado Department of Public Health and Environment, Air Pollution Control Division, Denver, Colorado, by the Desert Research Institute, Reno, Nevada. July 1, 1996."

APPENDIX B: TRANSPORTATION PLAN

Page B-2, Map B-1.1. Delete Map B-1.1 and replace with the following revised map.



Map B-1.1 General Location Map for the Continental Divide/Wamsutter II Project, Sweetwater and Carbon Counties, 1999.

APPENDIX D: WILDLIFE PROTECTION PLAN

D-2.0 IMPLEMENTATION PROTOCOL

Page D-4, Table D-2.1, column 2, lines 3 and 4. On line 3 change the date "November 15" to "early November", and on line 4 change the date "early February" to "early January".

Page D-6, Table D-2.3, column 1, lines 19 and 20 and column 2, line 15. In column 1, lines 19 and 20, replace "(within 0.25 mi of proposed well locations or 300 ft of proposed roads)" with "(within 200 m of proposed disturbance)", and in column 2, line 15 change the dates "March 15 and August 15" to "April 15 and June 30".

D-2.2.2 Threatened, Endangered, Candidate, and Other Species of Concern

Page D-11, Table D-2.4, line 6. Insert a new species as follows "White-faced ibis; *Plegadis chihi*; SC; X; X; --; No; FT(P/R)".

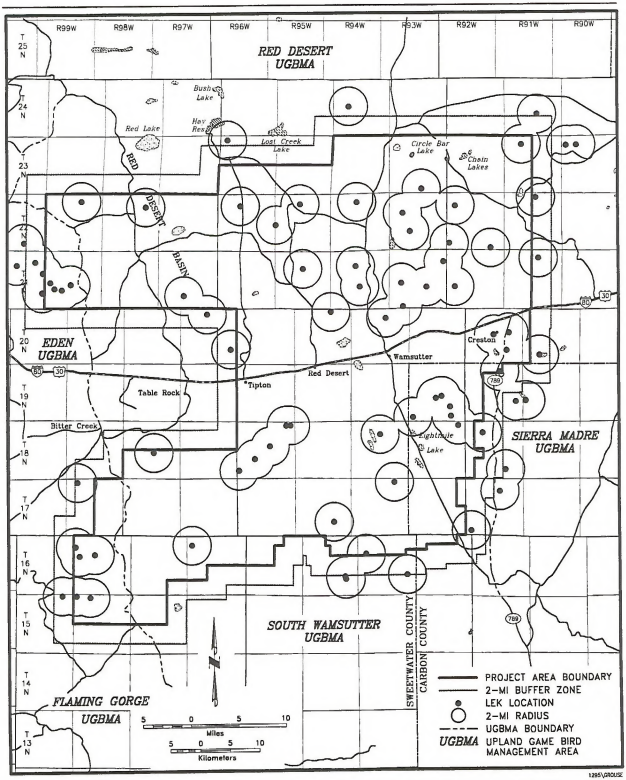
Page D-13, Table D-2.5, line 2. Delete the row starting with "white-faced ibis".

D-2.2.2.3 Mountain Plover

Page D-17, column 1, paragraph 1, lines 2, 9, 10, 18, 19, 21, 22, 25, 26, and 29. On line 2 replace the number "6" with "4"; on line 9 replace "March 15" with "April 15"; on line 10 replace "August 15" with "June 30"; on line 18 replace "March" with "April"; on line 19 replace "July 15" with "June 30"; on line 21 replace "March" with "April"; on line 22 replace "March 31" with "April 30", "July 1" with "June 15", and "August 15" with "June 30"; on line 25 replace "April" with "May", "30" with "15", and "two" with "three"; on line 26 replace "two" with "three"; and on line 29 add a new sentence that reads: "Where access roads and/or well locations have been constructed prior to the mountain plover nesting season and use of these areas has not been initiated for development actions, site investigations of these disturbed areas would be conducted prior to use to determine whether mountain plover are present."

D-2.2.3 Sage Grouse

Page D-18, Map D-2.3. Delete Map D-2.3 and replace with the following revised map.



Map D-2.3 Known Sage Grouse Lek Locations, Continental Divide/Wamsutter II Natural Gas Project Area, Sweetwater and Carbon Counties, Wyoming, 1999.

D-2.3.2.3 Mountain Plover

Page D-22, column 1, paragraph 2, line 2. After the word "lakes" insert ", areas with vegetation <4 inches in height".

APPENDIX E: BIOLOGICAL ASSESSMENT

E-1.0 INTRODUCTION

Page E-1, column 2, paragraph 2, lines 2 and 14. On line 2 delete the word "the" at its first occurrence and on line 14 insert a new sentence that reads: "There currently is no designated critical habitat for any threatened or endangered species in the CD/WIIPA."

Page E-2, Table E-1.1, line 13. Change the federal status for mountain plover from "C" to "Proposed as T".

E-2.0 PROJECT DESCRIPTION

Page E-5, column 1, paragraph 3, line 6. After the word "areas," insert "probable sage grouse nesting areas (i.e., areas within 2.0 mi of sage grouse leks),".

E-2.2 ALTERNATIVE A - 14-ACRE MAXIMUM SURFACE DISTURBANCE PER FEDERALLY MANAGED SECTION IN SRAS

Page E-6, paragraph 2, line 10. Replace the percentage "27%" with "47%".

E-4.1 APPLICANT-COMMITTED MEASURES

Page E-12, column 2, item 17, line 2. After the word "lakes" insert ", areas with vegetation <4 inches in height".

Page E-13, column 1, bullet 3. Delete the entire text of the bulleted item and replace with:

"• Surveys would be required by the BLM to clear an action for mountain plovers prior to beginning a planned activity, and surveys would be conducted during the period of April 15-June 30 for development activities planned during this period."

Page E-13, column 2, line 7. Insert a new bulleted item as follows:

"• Where access roads and/or well locations have been constructed prior to the mountain plover nesting season and use of these areas has not been initiated for development actions, the BLM would require site investigations of these disturbed areas prior to use to determine whether mountain plover are present. In the event mountain plover nesting is occurring, the BLM may require delays in development activities until nesting is complete."

Page E-13, column 2, item 19, lines 1 and 2. Delete the phrase "Operators would consult with the USFWS and/or BLM" and replace with "Where prairie dog colonies would be disturbed, Operators would consult with the USFWS and/or the BLM and BLM would initiate informal consultation with the USFWS".

E-5.1.1.2 Potential Effects

Page E-15, column 2, paragraph 3, lines 2 through 4. On lines 2 and 3 delete the phrase "there would be no effect to" and insert "the proposed project is unlikely to adversely affect", and on lines 3 and 4 delete the phrase "due to the Proposed Action or alternatives".

E-5.2.6.3 Mitigation Measures

Page E-25, column 2, lines 4, 5, and 18. On line 4 replace "March 15" with "April 15", on line 5 replace "August 15" with "June 30", and on line 18 replace "August 15" with "July 1" and "March 15" with "April 15".

7.0 COMMENTS AND BLM RESPONSES

7.1 PUBLIC MEETINGS

Two public meetings designed to allow area residents and other attendees to verbally comment on the proposed project were held--one in Rock Springs on May 24, 1999, and one in Rawlins on May 25, 1999. The attendance records and proceedings for the public meetings are presented below. Table 7.1 presents a list of commentors at both meetings.

7.1.1 Rock Springs Meeting, May 24, 1999

7.1.1.1 Attendance Record

The attendance record for the Rock Springs meeting is presented in Table 7.2.

Table 7.1 List of Public Meeting Commentors, Continental Divide/Wamsutter II Natural Gas Project, Sweetwater and Carbon Counties, Wyoming.

Meeting Attended	Comment Number	Commentor
Rock Springs Meeting (May 24, 1999)	1	Donald Hartley, Southwest Wyoming Industrial Association
	2	G.W. Bragh
	3	David Bunning, John Bunning Transfer Company, Inc.
	4	Tim Kaumo, SW Wyoming Mineral Association
	5	William Johnson, Union Pacific Resources
	6	Ellis L. Wheeler, Searle Bros.
	7	Dallas C. Bennett, Texaco ETP Inc.
	8	Terrence M. McNulty, Landowner
Rawlins Meeting (May 25, 1999)	1	Frank Krugh, Marathon Oil Company
	2	Doug Dowlin, Highland Enterprises
	3	Art Zeiger, Carbon County Commissioner
	4	Trent Morgan, Welding Contractor

Table 7.2 List of Attendees at the May 24, 1999, Public Meeting in Rock Springs, Wyoming, Continental Divide/Wamsutter II Natural Gas Project, Sweetwater and Carbon Counties, Wyoming.

Alvin Schmaltz	William J. Johnson	Jeanne Zuick
Ross Hennerman	C.L. Whiler	Birch Smith
Don and Nancy Bigley	David Petrie	Anne Smith
Gene Holt	LaVeta B. Pennock	Keith Slater
Tim Kaumo	Juanita Myers	G.W. Braze
Nellie Secale	David J. Bunning	Dan Hartley
Pete Guernsey	Edgar T. Fay	Chuck Thompson
Curtis and Lisa Nelson	J.E. Mueller	Mike Cochran
Lisa Lelson	Garry Fedrizzy	Broch Pope
Rod Prosceno	Betty Wilkinson	Bob Flansburg
Chris Frost	A.C. Egbert	Ray Lovato
J. Hinda	Doug Howard	Richard Vasa
Salley Pedersen	Keith Dang	Randy Shipman
Frank Links	Lyle Woelich	Sharon Hamilton
		Bob Hamilton

7.1.1.2 Record of Proceedings/Rock Springs

CONTINENTAL DIVIDE/WAMSUTTER II DRAFT EIS
PUBLIC HEARING
MAY 24, 1999
7:00pm

Meeting started at 7:00 P.M.. Bill LeBarron introduced himself and welcomed everybody. Explained to the audience that the court reporter failed to appear for the hearing and a tape recorder was not available, therefore, Bill LeBarron, Alicia Gross Giles, and Teri Deskins will take notes to at least capture the gist of public comments. Bill LeBarron read a prepared statement to the audience (see Attachment 1). Introduced the following individuals involved with the preparation of the EIS.

Pete J. Guernsey - Project Manager, TRC Mariah Associates, Inc., an environmental consulting firm contracted to prepare the draft EIS.

Kirk Steinle - Amoco Production Company, project coordinator for oil and gas operators participating in the development project.

Clare Miller - BLM Rawlins Field Office, BLM Team Leader for preparation of the Draft EIS.

Teri Deskins - BLM Rock Springs Field Office Team Leader for the Draft EIS.

Scott Archer - BLM Air Quality Specialist from the National Applied Resource Sciences Center in Denver, coordinator for the Air Quality Analysis.

Clare Miller summarized the Continental Divide/Wamsutter II Natural Gas Project and findings of the draft environmental impact statement. (See Attachment 2)

Bill recognized the first registered speaker.

SPEAKERS:

1 Donald Hartley, Southwest Wyoming Industrial Association - In favor of the Proposed Action of 3,000 wells. The timing of this project is appropriate in light of the budget shortfalls faced by Sweetwater and Carbon Counties. This project could generate one billion dollars in the next 20-30 years with a payroll of 660 million. Support a decision in favor of the Proposed Action.

Raocy Shipman - Elected to send in written comments.

Chuck Thompsen, Key - Elected to send in written comments.

2 G. W. Bragh, SCC Sterling Company - The most important statement is "No significant

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5 wells dug by the Oil & Gas companies. Nobody in the oil field wants to lose these. We even stop and watch sage chickens cross the road and count them. We have to supply what we have to other parts of the United States just as we count on them to provide us with their products.

With no more registered speakers and no more testimonies for the record, I declare this public hearing closed as of 7:50 P.M. - Bill LeBarron

Bill informed the group "If any of you have further questions, feel free to discuss them with either BLM staff; Peter Guernsey, TRC Mariah Associates Inc., and/or Kirk Steinle.

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2 impact." If it doesn't impact anything end it helps the economy and me personally. Let's go on with it.

Ellis Wheeler, Searle Brothers - Elected to send in written comments.

3 David Bunning, John Bunning Transfer Company, Inc. - Rock Springs native. Need to modify the FEIS, economic section. Assuming that 2,000 wells are drilled and at $12,000 per rig move would create $24 million of which one-half would be wages or $12 million payroll. Considering only 5% sales tax, it would generate $600,000 to the county coffers. If 3,000 wells are drilled, it would be $36 million, $18 million in wages, and $900,000 in sales tax revenue. Considering a 1.5 job multiplier (every 2 jobs creates a third), sales tax generated from moving drilling rigs would be 1.3 million. A year-round job paying $30,000 would create a payroll of 392,430 for moving drilling rigs. BLM needs to look at the social-economic effects and not just the adverse effect to environment. Need to look at people. More are moving out of the state.

4 Tim Kasmo, Southwestern Wyoming Mineral Association - Since November 1997, the oil and gas industry has lost 52,000 jobs and shut down 136,000 oil wells and 59,000 gas wells. Industry will probably be looking at going overseas to quote Bill Richardson. (See Attachment 3, Letter from Southwest Wyoming Mineral Association and Associated Press article from the Casper-Star by Bruce Smith).

Read an article from Wyoming Outdoor Council. (See Attachment 4, Wyoming Outdoor Council's Red Desert Article)

We live here and know what a great place this is. We want this project to go through. This is our lowest in years. We've laid people off. No jobs for summer students. It's been going on for the last seven to eight months since we've done any work. Common sense needs to be used. This is what we're up against finishing up Wyoming's Outdoor Council internet article). We have to fight what we read on the internet. As Dave said about social economics. Wyoming is losing it's population. They're looking for work somewhere else besides Wyoming. We don't want the industry to go over seas. We've been here a long time. We're going to have to help this.

I am speaking for the Mineral Association and we're in total support of this project.

5 William Johnson, Union Pacific Resources - This is America and things are supplied from one part of the country to the other. We can't grow watermelons in Wyoming. So we get them from somewhere else. We don't make cars. We get them from other parts of the United States. We have the natural gas that is supplied to other parts of the United States. We are sitting on coal, oil and gas and we need other parts of the United States to enjoy this. We have the natural gas and I feel others need to enjoy it. The greatest antelope herd in the United States is found in this area. Come and look at deer in the oil patches. Sage Chicken didn't leave the oil field, it just moved to another ditch. Sage Chickens are by the water

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PUBLIC MEETING/HEARING PROCEEDINGS
CONTINENTAL DIVIDE/WAMSUTTER II
DRAFT ENVIRONMENTAL IMPACT STATEMENT

May 24, 1999 - 7 pm - BLM Rock Springs Field Office
May 25, 1999 - 7 pm - BLM Rawlins Field Office

Welcome and opening remarks: BLM Manager and/or meeting administrator

Good evening. I would like to welcome you to this public hearing for the Continental Divide/Wamsutter II Draft Environmental Impact Statement. I am_____, the _____ for the BLM Rock Springs / Rawlins Field Office. I will be the hearing officer this evening. In addition, I would also like to introduce the following individuals who helped prepare the document and who have been available during the open house and who will be available immediately after the formal testimony to help answer any further questions.

Peter J. Guernsey - Project Manager, TRC Mariah Associates Inc., an environmental consulting firm contracted to prepare the draft EIS.

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Kirk Steinle - Amoco Production Company, project coordinator for oil and gas operators participating in the development project.

Clare Miller - BLM Rawlins Field Office, BLM Team Leader for preparation of the Draft EIS.

Teri Deakins - BLM Rock Springs Field Office, assistant Team Leader for the Draft EIS.

Scott Archer - BLM Air Quality Specialist from the National Applied Resource Sciences Center in Denver, coordinator for the Air Quality Analysis.

_____ - _____

_____ - _____

_____ - _____

2

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The purpose of this hearing is to provide the public an opportunity to submit for the record oral and written testimony on the recently completed draft environmental impact statement for the Continental Divide/Wamsutter II Natural Gas Project located approximately north and south of Wamsutter, Wyoming. This Environmental Impact Statement was prepared by TRC Mariah Associates Inc., an environmental consulting firm, with the guidance, participation, and independent evaluation of the Bureau of Land Management.

All comments on the draft environmental impact statement, both oral and written received tonight, will be considered in preparing the final environmental impact statement. Comments, including names and street addresses of participants will be available for public review during business hours and may be published as part of the final environmental impact statement. Individual respondents may request confidentiality. If you wish to withhold your name or street address from public review or from disclosure under the Freedom of Information Act, you must state this prominently at the beginning of your comments. Such requests will be honored to the extent allowed by law. All

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submissions and oral statements from organizations or businesses, and from individuals identifying themselves as representatives or officials of organizations or businesses, will be made available for public inspection in their entirety.

Written comments will be received by the BLM through July 1, 1999, and should be sent to the BLM, attention Clare Miller, EIS Team Leader, P.O. Box 2407, Rawlins, Wyoming, 82301.

Before I begin to recognize those of you who have asked to testify, I would like to set some ground rules. If you have not registered, please do so. If you have indicated you wish to testify, I will recognize you in the order that you have registered. If you registered and did not indicate you wish to testify, but decide during the proceedings you want to testify, I will ask for additional comments after all of the registered speakers have spoken.

When recognized, please come up to the podium so everyone present can hear, state your name, address, and if you represent someone other than yourself, and the name of the organization. Please speak clearly so that the reporter can hear your remarks. We generally limit testimony to ten minutes to allow

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everyone a chance to speak; however, if we have only a few people who want to testify, we may allow you to speak a bit longer.

Also, if you are testifying from a written statement, if you would give us a copy of your statement, it will help the court reporter in preparing an accurate record.

As a public hearing, this is not a forum for questions and debate. We request that you not question anyone during their testimony. However, the reporter or I may need to ask a question for clarification of those who do testify.

We realize that some of you may have questions or items that you want to discuss. After the formal hearing is closed, BLM staff, Peter Guernsey representing the contractor, and Kirk Steinle who is the company's representative will be available to answer questions. However, questions and comments will not be recorded and will not be made part of the formal record.

Are there any questions regarding these proceeding?

I would now like to have Clare Miller, the BLM EIS

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Team Leader, briefly summarize the Continental Divide/Wamsutter II Natural Gas Project and findings in the draft environmental impact statement. Immediately after the summary, public testimony will begin.

I will now recognize our first registered speaker.

Thank you. That is the last registered speaker. Are there any members of the audience who wish to introduce testimony for the record this evening?

If there are no further speakers, I declare this public hearing closed as of ____ p.m. Thank you very much for attendance. If any of you have further questions, feel free to discuss them with the either BLM staff, Peter Guernsey - representative of TRC Mariah Associates Inc., and/or Kirk Steinle - company representative.

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Executive Summary

Amoco Production Company, Union Pacific Resources Company, Yates Petroleum Corporation, Snyder Oil Corporation, and other natural gas operators (collectively known as the Operators) propose to explore for and develop natural gas reserves on the Continental Divide/Wamsutter II Project Area (CD/WIIPA) in eastern Sweetwater County and southwestern Carbon County, Wyoming. This draft EIS was prepared in accordance with the National Environmental Policy Act of 1969, as amended, to assess the environmental consequences of the Operators' proposed development and is intended to provide the public and decision-makers with a complete and objective evaluation of impacts, both beneficial and adverse, resulting from the Proposed Action and reasonable alternatives.

The Proposed Action, two alternative development strategies, and a No Action Alternative are analyzed. Additional alternatives including those considering project area-wide well densities/spacing patterns, fewer wells, increased surface disturbance per well, phased development, no development, and development in the Adobe Town Wilderness Study Area were considered but rejected for environmental, economic, and/or legal reasons.

The CD/WII DEIS analyzes the impacts of the Proposed Action - full field development of 3,000 wells on

1

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3000 well locations, along with access roads, pipelines and other ancillary facilities. Alternative A is similar to the Proposed Action, but would limit disturbance on Federal lands in Sensitive Resource Areas (SRA) - areas containing high value resources - to no more than 14 acres of additional disturbance per section. Alternative B also is similar to the Proposed Action, but would limit disturbance to no more than 30 acres of additional disturbance per section on Federal lands within sensitive resource areas. The No Action Alternative analyzes the current, ongoing level of development (845 wells) within the project area, and continuation of that activity into the future.

The No Action Alternative analyzed in this EIS would involve the rejection of the Operators' Proposed Action and Alternatives A and B; however, denial of the development alternatives would not constitutes a denial of all natural gas development on the area. Since over half of the CD/WIIPA is not federally owned and since the BLM would not deny access to these private and state owned lands, nor would the BLM allow the drainage of federal minerals, some developmsnt of the Continental Divide/Wamsutter II project area would occur under the No Action Alternative.

The proposed project is to explore for and develop natural gas and condensate reserves present in the Almond Formation and other formations at depths of

2

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approximately 7,000-10,000 ft in the project area. The project area encompasses approximately 1,061,200 acres (50 % federal surface, 1 % state surface, and 49 % private surface).

Operators propose to construct, drill, complete, operate, and reclaim a maximum of 3,000 new well locations on variable spacing patterns within the project area beginning in 1999 (subsequent to the release of the Record of Decision) and continuing for 20 years with an estimated life of project of 30-50 years. Additional construction activities include a total of approximately 1,500 mi of new or upgraded roads, 1,500 mi of new pipelines, five compressor stations, one gas processing facility, 10 evaporation ponds, 5 disposal wells, and 50 water well. Standard procedures as currently used in gas field developments throughout Wyoming would be employed during project development and operations, and all project activities conducted during the LOP would comply with applicable federal, state, and county laws, regulations, and stipulations. Gas from the project would be transported through existing and newly developed pipelines linking natural gas wells with existing regional pipelines in the project area.

Numerous standard project-specific and site-specific mitigation measures would be employed during all phases of the project to assure that potential impacts are minimized. Site-specific measures would

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be applied as specified in approved applications for permit to drill and rights of way applications for each new project feature. Surveys and/or monitoring would be conducted for cultural resources, paleontological resources, raptor nests, sage grouse leks, threatened, endangered, candidate, and special status species, and reclamation areas to document their status relative to specific disturbance activities. Reclamation would be conducted as soon as possible on areas disturbed during initial construction that are not required for the LOP. Upon completion of the project, all wells would be plugged and abandoned, surface facilities would be removed, and most disturbed areas would be reclaimed and revegetated.

Critical elements of the human environment that could be affected by the proposed project include air quality, cultural resources, environmental justice, floodplain, Native American religious concerns, threatened and endangered (T&E) species, hazardous or solid wastes, water quality, wetlands/riparian zones, and wilderness. Potentially significant adverse impacts could occur to these elements and other resources as follows: surface water resources under any alternative; soils and vegetation on stabilized dunes under the Proposed Action and No Action Alternatives; oil and gas development and resources under any alternative that denies mineral exploration and development of existing leases or extract these resources;

4

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recreational users and rural residents that are displaced as a result of the project under the Proposed Action; big game and raptor productivity as a result of displacement due to human activity during project development under the Proposed Action; and visual resources in Visual Resource Management (VRM) Class II areas under the Proposed Action and No Action Alternatives.

No significant impacts to ground water resources in the project area are anticipated under any alternative.

Since BLM-approved activities must comply with all applicable local, state, tribal, and federal air quality laws, statues, regulations, standards, and implementation plans, significant adverse impacts to air quality are not anticipated to occur from implementation of the proposed action or any of the alternative actions.

No significant atmospheric deposition (acid rain) impacts are predicted to occur in sensitive area lakes, including the extremely sensitive lakes in the PSD Class I Mount Zirkel Wilderness Area.

Given the reasonable, but conservative, nature of the cumulative air quality impact analysis it is unlikely that noticeable visibility impacts would occur in adjacent wilderness areas.

5

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Site specific paleontologic surveys and monitoring would be conducted as necessary to minimize potential adverse impacts to important fossils, and therefore, no significant impacts are anticipated under any alternative.

Potential adverse impacts to cultural resources would be mitigated through data recovery and/or avoidance of significant properties. No significant impacts are anticipated under any alternative.

Potential impacts to wild horses under the proposed action and alternatives are not anticipated to be significant.

T&E species that may occur on the area include black-footed ferret, bald eagle, peregrine falcon, and Ute ladies tresses and described in the biological assessment for this project (see Appendix E). In addition, swift fox and mountain plover, proposed threatened species, potentially occur on the area, and four T&E fish species-- Colorado squawfish, humpback chub, bonytail chub, and razorback sucker-occur downstream in the Green River/Colorado River drainage. No adverse effects to these species or significant impacts to state sensitive species are anticipated from project development under any alternative.

This EIS presents the BLMs analysis of environmental impacts under the authority of NEPA and associated

6

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rules and guidelines. The BLM will use this analysis to make a decision regarding the continued authorization of construction, drilling, completion, operation, and reclamation activities as proposed by the operators for explorations and development of natural gas in the CD/WIIPA.

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Southwest Wyoming Mineral Association
P.O. Box 2783
Rock Springs, Wyoming 82902

May 14, 1999

Dear Members:

At a recent meeting of the Independent Petroleum Association of America and U S Energy Secretary Bill Richardson.....

(Bruce Smith- a pr) "According to the Independent Petroleum Assoc of America , since November, 1997 the oil and gas industry has lost 52,000 jobs and shut down 136,000 oil wells and 59,000 gas wells." To quote Bill Richardson, "There is real opportunity around the world, I know we have to take care of things here at home - but internationally, you guys need to look out a little. Especially if these mergers (among major oil companies) happen, I think there will be more opportunity for you overseas."

We don't need to look overseas, we have a potentially large, long term project in the works right here in our own backyard.

We are all well aware of the slow start we have had in the oil patch in 1998. We have an opportunity to help and sustain the oil & gas business in Wyoming. The draft environmental impact statement for Continental Divide/Wamsutter II Natural Gas Project was recently released. If you want to see this project approved by the BLM and see drilling start in 1999 you absolutely need to support it. The project proposes 3,000 location/3,000 wells, to be drilled over 20 years. We need to support "The Proposed Action - full field development."

The public meeting will be on May 24, 1999 at the Rock Springs BLM office at 7:00 p.m., with an open house from 1:30 to 4:00 p.m. It is very important that we have at least 100 supporters at these meetings. At recent BLM meetings concerning OA&G projects the support has been 9 environmentalists to 1 industry. If we want this project to move farward, we have to support it and let the BLM know that we are still here. Please make copies of this notice and pass it out to everyone that depends on all & gas to make their living, and encourage them to attend these meetings. If you have any questions or comments please call Betty at (307) 382-5650.

Thank you.

Lynn Hall, President — Betty Wilkinson, Secretary

Tim Kamno, Vice-president — LaVeta Peacock, Treasurer

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Oil industry changes may be boon for independents

By BRUCE SMITH
Associated Press

CHARLESTON, S.C. -- Recent tough times in the nation's oil patch may be easing while changes in the industry globally may provide new opportunities for independent producers, U.S. Energy Secretary Bill Richardson said Tuesday.

"Domestic oil and gas production is key to our economic energy and national security," Richardson told a meeting of the Independent Petroleum Association of America. "Addressing low oil prices requires balancing energy, economic and national security issues."

The domestic oil industry has been hammered by lower demand because of economic problems in Asia and warmer winters, increased production by some foreign producers and resumption of Iraqi oil exports.

Since November 1997, the industry has lost 52,000 jobs and shut down 136,000 oil wells and 59,000 gas wells, according to the association. It represents 8,000 crude oil and natural gas producers in 33 states.

With prices rebounding somewhat in recent months, Richardson said, "I say, and I say this guardedly, I think we're seeing some hopeful signs.

Please see OIL, B4

OIL

Continued from 'Casper'

He said that major oil companies have shifted more of their investment to overseas exploration and production, partly because of lower costs. In addition, recent mergers among the industry's largest companies may give independents an opportunity to acquire smaller domestic wells.

"It stands to reason that, as the majors look elsewhere, independent production will likely represent an ever-larger share of our domestic production," Richardson said. "Our policies of enhancing domestic production converge with the needs and interests of independent producers."

However, he said independent producers also need to look for niches overseas.

"There is just real opportunity around the world. I know we have to take care of things here at home -- but internationally, you guys need to look out a little more. Especially if these mergers happen, I think there will be more opportunity for you overseas," he said.

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Wyoming Outdoor Council — Frontline Report — Winter 1998-9 — Issues Update

The Red Desert: Natural Treasure Faces Opportunistic Destruction

by Tom Dustin

Despite the opportunistic destruction of much of your public lands by mining, timbering, overgrazing, oil and gas drilling and pollution, there still remain some exquisite crown jewels of nature and history they haven't gotten around to yet.

One of the grandest of these special places, the Wyoming Red Desert, is now "on the block." It's mostly our property, but its handled for you by the U.S. Bureau of Land Management (BLM), an agency with little history of sensitivity.

Listen to what's involved. The Red Desert reaches for 70 miles from South Pass to Rock Springs. It includes parts of the Great Divide Basin, a unique interior drainage encircled by the Continental Divide which keeps to itself all of the scant 10 inches of rain that falls there each year.

But that's just one of the Red Desert?s fascinations. Thousands of American emigrants seeking new lives in the unsettled West drove their wagons through South Pass as a break in the central Rocky Mountains, guided by Oregon Buttes, visible for a hundred miles.

A few miles further south in this sandy landscape, you come upon the Tri-Territorial Monument, marking the juncture of the three great land masses which define the entire western half of the United States, acquired during the first half of the nineteenth century: the Louisiana Purchase, the acquisition from Mexico, and the Oregon Territory.

A shiver of history, even reverence, is unavoidable. But travel only three more miles south on a sandy track and you ascend the gentle spine of Steamboat Mountain to a wonderland of green groves graced by a cool spring. Steamboat harbors a rare desert elk herd and one of the country?s last wild horse bands, and they all come periodically to the spring.

After a night of coyote serenades, continue your exploration down between Steamboat?s shoulder blades and to the south, where vast fields of sand dunes frame the Basin?s Tuni, an ancient volcanic core several hundred feet tall.

Look back to the ramparts of Steamboat, which resembles an immense Titanic plowing through acres fields and sand dunes on its way to some mythical port of call.

But something is dreadfully wrong here. You do not have to squint in the desert sunlight to see the grotesque intrusions on the landscape. Bisecting the Basin?s Tuni sand dune saucer is a long string of high tension poles, inserted in this pristine setting to deliver electricity to a U.S. Steel taconite iron ore mine at Atlantic City. The mine, but not the poles, quit 15 years ago.

Marring the surrounding desert are oil wells, storage tanks, gas lines and brine-water retaining ponds.

As if these blots on the landscape were not enough, they could be merely harbingers of an imminent invasion. Earlier this year the BLM announced its intent to offer 29 leases encompassing thousands of acres within the "Jack Morrow Hills" region to oil and gas corporations. The leases, scattered within a 600,000-acre secton, were to be sold on August 4.

Environmentalists, including this writer with 40 years? history exploring the region, were electrified. Groups including the Indiana Izaak Walton League, the Wyoming Outdoor Council, the Wildlife Management Institute and the Sierra Club filed strenuous objections. On July 29, BLM?s Wyoming office decided to defer granting the leases until they completed a "Coordinated Activity Plan" (CAP) to determine the impacts of oil and gas developments. That report is projected to come some time next year.

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There are countless reasons for objecting to the destruction of this unique natural and historic treasure. Here are just a few of them:

* Oil and gas prices are at historic lows. This would dramatically reduce revenues generated in exchange for plundering the Red Desert?s publicly-owned assets. The nation has no pressing need for the fuel that would be generated here.
* Desert elk and wild horse populations would be depressed or extirpated if leasing proceeds.
* Oil and gas facility construction would destroy the area?s pristine landscape and its cultural and historic resources, where public policy should instead dictate removing existing encroachments and permanently protecting the area?s wildlands, wildlife, water and air quality.
* Few opportunities remain to preserve America?s natural desert landscapes. This unique area cannot be sacrificed on the anvil of corporate profits.

Industry is counting on public ignorance and indifference. Prove them wrong: write to Al Pierson, Wyoming State Director, U.S. Bureau of Land Management, PO Box 1828, Cheyenne, WY 82003. Do it now. Present and future generations will be the beneficiaries of your actions.

Tom Dustin is Environmental Affairs Advisor to the Indiana Izaak Walton League.

7.1.1.3 Ellis Wheeler

PUBLIC COMMENT SHEET
Continental Divide/Wamsutter II Natural Gas Project
(Please Print Legibly)

Name: Ellis L Wheeler
Address: 1de Foothill #C
Rock Springs WY 82901
Organization: Seagle Power

Do you wish to be on the mailing list for this project? Yes X No ___
If you check yes, your comments including names and addresses will be made available for public review during business hours and may be published as part of the environmental analysis. If you wish to withhold your name and address from disclosure under the Freedom of Information Act, you must state so at the beginning of your comments. We will honor your request to the extent allowed by law. If you represent an organization, your comments will be made available for public review.

Comments:

I Am A Native of Rock Springs. I hope this statement goes through. People I've my self Are getting A bit sick of worry About having a Job from day to day month to month. We need to start thinking About our People over here U.S.A. We need A little Stability in our industries. Me And my Fellow People have Spents here so let's get it together And Keep All of Us busy.

6

Thanks
Ellis Wheeler

Thank you for your comments.

7.1.1.5 Terrence M. McNulty

5/19/99

DEPT. OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
P.O. BOX1828
CHEYENNE, WYOMI. 82003-1828

DEAR SIR:

I AM A LANDOWNER IN THE AREA OF THE CONTINENTAL DIVIDE/WAMSUTTER II NATURAL GAS PROJECT. I HAVE SEVERAL CONCERNS REGARDING THE PROPOSED DRILLING.

8 1. THE EFFECTS OF AN EXTENSIVE DRILLING PLAN IN THE WINTERING LANDS OF RESIDENT BIG GAME MAMMELS.

9 2. SIGNIFICANT DESTRUCTION OF THE NATURAL TERRAIN FEATURES DUE TO GRADING OF NEW ROADS AND THE CONSTRUCTION OF WELLS AND DERRICKS.

10 3. DESTRUCTION OF RESOURSES AS IN #2 ABOVE BY WELLS BEING DRILLED PRIMARILY ON PUBLIC TRUST LANDS.

11 4. MONIES COLLECTED FROM GAS RECOVERY OPERATIONS BECOMING PART OF THE OVERALL FEDERAL BUDGET AND BEING DIVERTED OUT OF THE LOCAL ECONOMY. I THINK PRIVATE OWNERS SHOULD BE GIVEN A PREFERENTIAL STATUS IN WELL LOCATION TO MAXIMIZE REVENUE DISTRIBUTION IN THE PRIVATE SECTOR OF THE ECONOMY AND TO MINIMIZE IMPACT ON PUBLICALLY OWNED PROPERTY.

THANK YOU FOR ALLOWING ME TO EXPRESS MY CONCERNS FOR THIS PROPOSED PROJECT. PLEASE KEEP ME APPRAISED OF DEVELOPMENTS AND DECISIONS IN THE FUTURE.THANKS.

PIN# 04-2095-17-2-00-049.00

TERRENCE M. MCNULTY
1634 MORENO ST.
OCEANSIDE, CA 92054
(760) 966-0634

FIRST CLASS
99 MAY 25 AM 8:00
BLM
CHEYENNE, WYOMING

7.1.1.4 Dallas Bennett

PUBLIC COMMENT SHEET
Continental Divide/Wamsutter II Natural Gas Project
(Please Print Legibly)

Name: Dallas C Bennett
Address: P.O. Box 1679
Rock Springs Wyo 82901
Organization: Tesco Etp Inc.

Do you wish to be on the mailing list for this project? Yes X No ___
If you check yes, your comments including names and addresses will be made available for public review during business hours and may be published as part of the environmental analysis. If you wish to withhold your name and address from disclosure under the Freedom of Information Act, you must state so at the beginning of your comments. We will honor your request to the extent allowed by law. If you represent an organization, your comments will be made available for public review.

Comments:

Tesco supports the project and proposed
urges the BLM to move forward as fast
as possible. Thank you.

7

Dallas C Bennett

Thank you for your comments.

7.1.1.6 BLM Response to Rock Springs Public Meeting Comments

Comment Response: All Commentors - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

Comment Response 1: Donald Hartley - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

Comment Response 2: G.W. Bragh - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

Comment Response 3: David Bunning - Thank you for taking the time to review the DEIS and for providing your comments. The BLM believes socioeconomic impacts are adequately addressed in the DEIS (see DEIS Sections 3.4 and 4.4). The BLM considers all comments during preparation of an EIS.

Comment Response 4: Tim Kaumo - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

Comment Response 5: William Johnson - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

Comment Response 6: Ellis Wheeler - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

Comment Response 7: Dallas Bennet - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

Comment Response 8: Terrence M. McNulty - The BLM believes that with the implementation of the mitigation/protection practices developed for this project most significant impacts to big game animals on their winter ranges, and to the winter ranges themselves would be avoided. A more thorough discussion is presented in DEIS Section 4.2.3.1, pages 4-47 to 4-58.

Comment Response 9: Terrence M. McNulty - The BLM believes that impacts to terrain features would not be significant because project activities would not require moving large amounts of earth and no prominent landforms would be destroyed. Roads and pipelines would be built to project-specific guidelines to reduce their impacts. More thorough discussions are presented in DEIS Section 4.1.2, pages 4-22 to 4-25 and Section 4.6, pages 4-89 to 4-92.

Comment Response 10: Terrence M. McNulty - Please see the previous comment response. An estimated 50% of the 3,000 wells (1,500) would be drilled on private lands.

Comment Response 11: Terrence M. McNulty - The BLM has no jurisdiction as to how monies collected from oil and gas operations are distributed. Private surface owners normally negotiate with Operators for fees for operating on their land, and private mineral owners normally receive a payment for any gas/oil recovered from their reservoirs. State and local taxes on gas and condensate production during the first 25 years of operations would total approximately $845 million (see Table 4.15 in this FEIS), and this money would be used within Wyoming and, in many cases, within Sweetwater and Carbon Counties. Federal royalties during the same 25-year period would total $396 million (see Table 4.15 in this FEIS), half of which is returned to the State of Wyoming.

7.1.2 Rawlins Meeting, May 25, 1999

The list of commentors at the Rawlins meeting is presented in Table 7.1.

7.1.2.1 Attendance Record

Table 7.3 presents the list of attendees at the Rawlins meeting.

Table 7.3 List of Attendees at the May 25, 1999, Public Meeting in Rawlins, Wyoming, Continental Divide/Wamsutter II Natural Gas Project, Sweetwater and Carbon Counties, Wyoming.

Jason Maxon	Kenny White
Neil Hurst	Donald R. Corson
Art Zeiger	Mark Balderston
Jerome Nash	Brent Lee
Don Smith	Gary English
Jon Johnson	Doug Dowlin
Frank Krugh	Tori Adams
Dan Haman	Trent Morgan
Kip B. Purinton	

7.1.2.2 Record of Proceedings/Rawlins

BUREAU OF LAND MANAGEMENT

STATE OF WYOMING, COUNTY OF CARBON

IN RE:)
)
CONTINENTAL DIVIDE/WAMSUTTER)
II DRAFT EIS.)

PUBLIC HEARING

BEFORE: MR. KURT KOTTER, Hearing Officer Presiding.

ORIGINAL

BE IT REMEMBERED that on the 25th day of May, 1999, at the BLM Office, 1300 North Third, Rawlins, Carbon County, Wyoming, the above-entitled matter came on for hearing before MR. KURT KOTTER, Hearing Officer Presiding, whereupon the following proceedings were had, to wit:

P R O C E E D I N G S:

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for the Draft EIS from the Rock Springs office.

Scott Archer, right in back, behind the magic pillars that we have in our room here. Scott is the BLM air quality specialist from the Service Center in Denver, and he is the coordinator for the Air Quality Analysis for this EIS.

Kirk just walked in. He is in the back, and he is standing against the back of the room there. Again, with Amoco Productinne, the project coordinator for all end gas operators participating in the development project.

I would also like to say that we have Mary Reed here. Mary is a wildlife biologist with BLM here in Rawlins. She is a team member on the preparation of the draft EIS. Mary will be available for any questions or comments you might have at the end of the formal testimony or formal hearing.

The purpose of this hearing is to provide the public an opportunity to submit for the record oral and written testimony on

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HEARING OFFICER KOTTER: Good evening. I'd welcome you to this public hearing for the Continental Divide/Wamsutter II Draft EIS. My name is Kurt Kotter, and I am the field manager for the Rawlins BLM office. I would like to introduce the following individuals who have helped prepare the Draft EIS and who have been available during the open house this afternoon. And they will be available immediately after our meeting, after the formal testimony to answer any further questions that you might have.

Peter J. Guernsey. Pete is the project manager with TRC Marieh Associates Inc., an environmental consulting firm that is contracted to prepare the draft EIS document.

Kirk Steinle. I saw Kirk earlier. Maybe we'll catch him later as he comes in. Kirk is with Amoco Production Company. When he comes in, I'll make sure to introduce him.

Teri Deskins, standing there by the side, BLM's Rock Springs office, team leader

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the recently completed draft environmental impact statement for the Continental Divide/Wamsutter II Natural Gas Project located approximately north and south of Wamsutter, Wyoming. This Environmental Impact Statement was prepared by TRC Marieh Associates Inc., an environmental consulting firm, with guidance, participation, and independent evaluation of the Bureau of Land Management.

All comments on the draft Environmental Impact Statement, both oral and written received tonight, will be considered in preparing the final Environmental Impact Statement. Comments, including names and street addresses of participants will be available for public review during business hours and may be published as part of the final Environmental Impact Statement.

Individual respondents may request confidentiality. If you wish to withhold your name or street address from public review or from disclosure under the Freedom of Information Act, you must state this

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prominantly at the beginning of your comments. Such requests will be honored to the extent allowed by the law. All submissions and oral statments from organizations or businesses and from individuals identifying themselves as representatives or officials of organizations or businesses, will be made available for public inspection in their entirety.

Written comments will be received by the BLM through July 1, 1999, and should be sent to the BLM, attention Clare Miller, EIS Team Leader, P.O. Box 2407, Rawlins, Wyoming, 82301.

Before I begin to recognize those of you who have asked to testify, I would like to set some ground rules. If you have not registered, please do so. If you have indicated your wish to testify, I will recognize you in the order that you have registered. If you registered and did not indicate you wish to testify, but decide during the proceedings you want to testify, I will ask for additional comments after all

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of the registered speakers have spoken.

When recognized, please come up to the podium so everyone present can hear, state your name, address, and if you represent someone other than yourself, the name of the organization you represent. Please speak clearly so that the court reporter can hear your remarks.

Now, we generally limit testimony to ten minutes to allow everyone a chance to speak; however, it appears we only have a few people who are going to testify this evening. I think we would allow you to speak a bit longer, if that's necessary.

Also, if you are testifying from a written statement, if you would give us a copy of your statement, it will help the court reporter in preparing an accurate record.

As a public hearing, this not a forum for questions and debate. We ask that you not question anyone during their testimony. However, the reporter or I may need to ask a question for clarification of those who do testify.

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We realize that some of you may have questions or items that you want to discuss. After the formal hearing is closed, BLM staff, Peter Guernsey representing the contractor, and Kirk Steinle who is the company's representative, will be available to answer questions. However, questions and comments will not be recorded and will not be made part of the formal record.

Now, are there any questions regarding these proceedings?

Now, how we proceed this evening is there's a form out there you can fill out for written comments if you desire to go that route. If you do not wish to speak this evening, I think Teri will have forms on the table that you can use to put down whatever written statements you would like to leave with us.

Okay. At this point then, I would like to have Clare Miller, the BLM EIS Team Leader, briefly summarize the Continental Divide/Wamsutter II Natural Gas Project and findings in the draft EIS. After he makes this summary, then we'll have our time for

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the public testimony. Clare.

MR. MILLER: Amoco Production Company, Union Pacific Resources Company, Yates Petroleum Corporation, Snyder Oil Corporation, and other natural gas operators, collectively known as the operators, propose to explore for and develop natural gas reserves on the Continental Divide/Wamsutter II Project Area in western Sweetwater County and southwestern Carbon County, Wyoming.

This draft EIS was prepared in accordance with the National Environmental Policy Act of 1969, as amended, to assess the environmental consequences of the operators' proposed development and is intended to provide the public and decision-makers with a complete and objective evaluation of impacts, both beneficial and adverse, resulting from the proposed action and reasonable alternative.

Now, the proposed action, two alternative development strategies, and a No Action Alternative are analyzed. Additional alternatives including those considering

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project area-wide well densities/spacing
patterns, fewer wells, increased surface
disturbance per well, phased development, no
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but rejected for environmental, economic,
and/or legal reasons.

The Continental Divide/Wamsutter II
Draft EIS analyzes the impacts of the
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locations, along with access roads,
pipelines, and other ancillary facilities.

Alternative A is similar to the
proposed action, but would limit disturbance
on Federal lands in sensitive resource
areas, areas containing high value
resources, to no more than 14 acres of
additional disturbance per section.

Alternative B also is similar to the
proposed action, but would limit disturbance
to no more than 30 acres of additional
disturbance per section on Federal lands
within sensitive resource areas. The No
Action Alternative analyzes the current,

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ongoing level of development of
approximately 845 wells within the project
area, and a continuation of that activity
into the future.

The No Action Alternative analyzed
in this EIS would involve the rejection of
the operators' proposed action and
Alternatives A and B; however, denial of the
development alternatives would not
constitute a denial of all natural gas
development on the area.

Since over half of the Continental
Divide/Wamsutter II project area is not
federally owned and since the BLM would not
deny access to these private and state-owned
lands, nor would the BLM allow the drainage
of federal minerals, some development of the
Continental Divide/Wamsutter II project area
would occur under the No Action Alternative.

The proposed project is to explore
for and develop natural gas and condensate
reserves present in the Almond Formation and
other formations at depths of approximately
7,000 to 10,000 feet in the project area.
The project area encompasses approximately

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1,061,200 acres, 30 percent of which is
federal surface, 49 percent private surface,
and 1 percent state surface.

Operators propose to construct,
drill, complete, operate, and reclaim a
maximum of 3,000 new well locations on
variable spacing patterns within the project
area beginning in 1999, subsequent to the
release of the record of decision of this
EIS, and continuing for 20 years with an
estimated life of project of 30 to 50 years.

Additional construction activities
include a total of approximately 1,500 miles
of new and upgraded wells, 1500 miles of new
pipelines, 5 compressor stations, 1 gas
processing facility, 10 evaporation ponds, 5
disposal wells, and 50 water wells.

Standard procedures as currently
used in gas field developments throughout
Wyoming would be employed during project
development and operations, and all project
activities conducted during the life of the
project would comply with applicable
federal, state, and county laws,
regulations, and stipulations. Gas from the

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project would be transported through
existing and newly developed pipelines
linking natural gas wells with existing
regional pipelines in the project area.

Numerous site-specific mitigation
measures would be employed during all phases
of the project to assure that potential
impacts are minimized. Site-specific
measures would be applied as specified in
approved applications for permit to drill
and rights-of-way applications for each new
project feature. Surveys and/or monitoring
would be conducted for cultural resources,
paleontological resources, raptor nests,
sage grouse lek, threatened, endangered,
candidate, and special status species, and
reclamation areas to document their status
relative to specific disturbance activities.

Reclamation would be conducted as
soon as possible on areas disturbed during
initial construction that are not required
for the life of the project. And upon
completion of the project, all wells would
be plugged and abandoned, surface facilities
would be removed, and most disturbed areas

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would be reclaimed and revegetated.

Critical elements of the human environment that could be affected by the proposed project include air quality, cultural resources, environmental justice, floodplains, Native American religious concerns, threatened and endangered species, hazardous or solid wastes, water quality, wetlands/riparian zones, and wilderness.

Potentially significant adverse impacts could occur to these elements and other resources as follows: surface water resources under any alternative; soils and vegetation on stabilized dunes under the proposed action and No Action Alternatives; oil and gas development and resources under any alternative that denies mineral exploration and development of existing leases or extract these resources; recreational users and rural residents that are displaced as a result of the project under the proposed action; big game and raptor productivity as a result of displacement due to human activity during project development under the proposed

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action; and visual resources in Visual Resource Management Class II areas under the proposed action and No Action Alternatives.

No significant impacts to groundwater resources in the project area are anticipated under any alternative.

Since BLM-approved activities must comply with all applicable local, state, tribal, and federal air quality laws, statutes, regulations, standards, and implementation plans, significant adverse impacts to air quality are not anticipated to occur from implementation of the proposed action or any of the alternative actions.

No significant atmospheric deposition -- which is acid rain -- impacts are predicted to occur in sensitive area lakes, including the extremely sensitive lakes in the PSD Class I Mount Zirkel Wilderness Area.

Given the reasonable, but conservative, nature of the cumulative air quality impact analysis, it is unlikely that noticeable visibility impacts would occur in adjacent wilderness areas.

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Site-specific paleontologic surveys and monitoring would be conducted as necessary to minimize potential adverse impacts to important fossils, and therefore, no significant impacts are anticipated under any alternative.

Potential adverse impacts to cultural resources would be mitigated through data recovery and/or avoidance of significant properties. No significant impacts are anticipated under any alternative.

Potential impacts to wild horses under the proposed action and alternatives are not anticipated to be significant.

T&E species that may occur on the area include black-footed ferret, bald eagle, peregrine falcon, and Uta ledisa trasaas as described in the biological assessment for this project which is in the draft bill. In addition, swift fox and mountain plover, proposed threatened species, potentially occur on the area, and four T&E fish species -- Colorado squawfish, humpback chub, bonytail chub, and razorback

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sucker occur downstream in the Green River/Colorado River drainage. No adverse impacts to these species or significant impacts to state sensitive species are anticipated from project development under any alternative.

As mentioned before, this EIS presents the BLM's analysis of environmental impacts under the authority of the National Environmental Policy Act and associated rules and guidelines. The BLM will use this analysis and subsequent public comment to make a decision regarding the continued authorization of construction, drilling, completion, operation, and reclamation activities as proposed by the operators for exploration and development of natural gas in the Continental Divide/Wamsutter II Project Area.

HEARING OFFICER KOTTER: Thank you, Clara. I will now recognize our first registered speaker. This would be Frank Krough with Marathon Oil.

MR. KROUGH: My name is Frank Krough, and I work with Marathon Oil

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Company. Our address is 1501 Stampede Avenue, Cody, Wyoming 82414. At this time I would thank all the people participating in the preparation of this EIS. I think their time and patience has proven beneficial if the document is as good as it looks to be.

Marathon is in favor of the proposed action that was presented in this document and that is a full-field development. By 1 the extra time that is spent with the air quality issue, it is felt to be well spent and that this issue will hopefully be cleared up during the comment period. It won't receive very many detrimental comments.

With that, we feel that the final EIS will be issued in an expeditious manner and hopefully that will allow development to commence this year and then continue next year and for the length of the project. And that's all I had to say.

HEARING OFFICER KOTTER: Thank you. Appreciate it. I have one maybe. Doug Dewlin. I saw him earlier. Did you have anything you would like to say?

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MR. DAWLIN: Yeah, I can make a few comments.

HEARING OFFICER KOTTER: Come up to the podium and please feel free to.

MR. DAWLIN: I'm Doug Dawlin of Highland Enterprises. I came here on March 3rd, 23 years ago, 1876, and I have had occasion to drive all over this country that is proposed down around the Haystacks, the Hanevoy Buttes, down in Adobe Town by the Everson Ranch, Bitter Creek, and so forth. And all that time I've seen a half dozen tourists or people looking for rocks or artifacts, whatever, down there. I think one of them was real glad to see us because 2 they had taken a shortcut off from a two-track across a little bit of doby, they were buried up to the frame, and they unloaded the camper, and a bunch of people were trying to get out.

I don't see where we've had any problem. Our drivers, myself, we try to slow down when we meet those people. We must protect our glass and windshields so to protect theirs and be the good neighbor. So

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as far as the dust control goes, all the operators have pretty well started putting a lot of water down when they construct the roads and give us compaction because the soil in the Wamsutter area and on down in Baggs and north and so forth.

If you don't get your compaction in, get it packed first, why, the soil just turns to flour, and all the contractors or 2 the operators recognize this and are putting a lot water down from the get-go, even before they started the construction of Pioneer Road, realizing if they get the compaction it saves them a lot of trouble down the road, not only for air quality but make the oil wells more accessible to trucks. So I am in favor of the whole project. Thank you.

HEARING OFFICER KOTTER: Thank you. Are there any members of the audience who wish to introduce testimony for the record as part of this hearing? Mr. Ziegler. This is Art Ziegler, County Commissioner from Carbon County.

3 MR. ZIEGLER: So I have to give my

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3 address and all this kind stuff again?

HEARING OFFICER KOTTER: I think we've got it.

MR. ZIEGLER: I am a county commissioner from Carbon County. I'd just like to say that as I said before many, many 3 times, we want all you operators to drill the wells, pump the gas, sell the gas, and pay your taxes. That's all I have to say.

HEARING OFFICER KOTTER: Anyone else who might care to introduce testimony as part of this hearing?

MR. MORGAN: My name is Trent Morgan. My address is 404 Ninth Street here in Rawlins, and I'm the welding contractor for Marathon. I'd just like to say I'm in favor of this. There are a lot of families, contractors, operators depending on the work 4 going forth. I hunt in Wamsutter and the surrounding area. I haven't seen a big impact on the wildlife. I don't think there's an impact on the wildlife. They use the grass on the right-of-ways as feed, and they use the roads -- the road ditches as grass. I just would like to say I'm in

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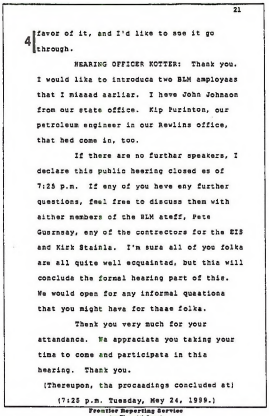

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favor of it, and I'd like to see it go through.

HEARING OFFICER KOTTER: Thank you. I would like to introduce two BLM employees that I missed earlier. I have John Johnson from our state office. Kip Purinton, our petroleum engineer in our Rawlins office, that had come in, too.

If there are no further speakers, I declare this public hearing closed as of 7:25 p.m. If any of you have any further questions, feel free to discuss them with either members of the BLM staff, Pete Gunsaney, any of the contractors for the EIS and Kirk Stahle. I'm sure all of you folks are all quite well acquainted, but this will conclude the formal hearing part of this. We would open for any informal questions that you might have for these folks.

Thank you very much for your attendance. We appreciate you taking your time to come and participate in this hearing. Thank you.

(Thereupon, the proceedings concluded at 7:25 p.m. Tuesday, May 24, 1999.)

Frontier Reporting Service
201 West 20th Street
Cheyenne, WY 82001

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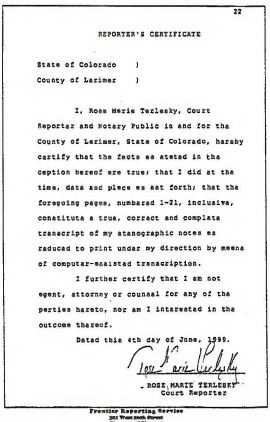

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REPORTER'S CERTIFICATE

State of Colorado)
County of Larimer)

I, Rose Marie Terlesky, Court Reporter and Notary Public in and for the County of Larimer, State of Colorado, hereby certify that the facts as stated in the caption hereof are true; that I did at the time, date and place as set forth; that the foregoing pages, numbered 1-21, inclusive, constitute a true, correct and complete transcript of my stenographic notes as reduced to print under my direction by means of computer-assisted transcription.

I further certify that I am not agent, attorney or counsel for any of the parties hereto, nor am I interested in the outcome thereof.

Dated this 4th day of June, 1999.

ROSE MARIE TERLESKY
Court Reporter

Frontier Reporting Service
201 West 20th Street
Cheyenne, WY 82001

7.1.2.3 BLM Response to Public Meeting Comments

Comment Response: All Commentors - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

Comment Response 1: Frank Krough - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

Comment Response 2: Doug Dowlin - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

Comment Response 3: Art Ziegler - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

Comment Response 4: Trent Morgan - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

7.2 COMMENT LETTERS AND BLM RESPONSES

Ninety-four comment letters were received on the DEIS (Table 7.4), and Table 7.5 identifies the general subject matter of each comment letter. Comment letters and BLM responses are presented on the following pages.

Table 7.4 Comment Letters Received on the DEIS for the Continental Divide/Wamsutter II Natural Gas Project, Sweetwater and Carbon Counties, Wyoming, 1999.

Letter Number	Commentor	FEIS Section Number
1	Den Constantino, Sweetwater Economic Development Association	7.2.1.1
2	Larry DiBrito	7.2.2.1
3	Jo Suftko, President of Rock Springs Chamber of Commerce	7.2.3.1
4	Randy Shipman, People for the USA/Flaming Gorge Chapter	7.2.4.1
5	Greg Cody, National Park Service	7.2.5.1
6	James F. Devine, U.S. Geological Survey	7.2.6.1
7	Mike Wilkinson, Mike Wilkinson Trucking, Inc.	7.2.7.1
8	Les White, Flying J. Oil & Gas Inc.	7.2.8.1
9	Len H. Carpenter, Wildlife Management Institute	7.2.9.1
10	Moe Morrow	7.2.10.1
11	Dennis Brabec, President, People for the USA, State of Wyoming	7.2.11.1
12	T.D. Latham, Willies Dirt Service, Inc.	7.2.12.1
13	Jay R. Anderson, Schmid Oilfield Services, Inc.	7.2.13.1
14	Lyle E. Woelich	7.2.14.1
15	Sally Pedersen, Rocky Mountain Casing Crews, Inc.	7.2.15.1
16	Larry DiBrito	7.2.16.1
17	Larry DiBrito	7.2.17.1
18	T.N. Tipton, Marathon Oil Company	7.2.18.1
19	Art Zeiger, Carbon County Commissioner	7.2.19.1
20	Taylor and Juanita Myers	7.2.20.1
21	David R. Dalton	7.2.21.1
22	David Weber	7.2.22.1
23	David Dennis	7.2.23.1
24	Larry and LaVeta Pennock	7.2.24.1
25	Richard Ducharme, Wire Technology Inc.	7.2.25.1
26	Scott A. Pilch	7.2.26.1
27	Paul D. ? (signature illegible)	7.2.27.1
28	William D. Shade	7.2.28.1
29	Wes R. Handley	7.2.29.1
30	Frank Krugh	7.2.30.1
31	Carol M. Rosencranse	7.2.31.1
32	John K. Woods	7.2.32.1
33	Nathan Leonard	7.2.33.1
34	Jeff Briggs	7.2.34.1
35	Gerry Pence	7.2.35.1
36	Clifford C. Main	7.2.36.1
37	Chris Frost	7.2.37.1
38	Eric Wenzel	7.2.38.1
39	Brad Franks	7.2.39.1
40	Alan L. Ennis	7.2.40.1
41	Kendra Kalivas	7.2.41.1
42	Paul Kalivas	7.2.42.1
43	David T. Johnson	7.2.43.1
44	Lloy Dene Greb	7.2.44.1
45	Caroline Trumbull	7.2.45.1

Table 7.4 (Continued)

Letter Number	Commentor	FEIS Section Number
46	Vicki L. Schoeber	7.2.46.1
47	Steve Olenick	7.2.47.1
48	Riley C. Skeen	7.2.48.1
49	Todd Fields	7.2.49.1
50	Richard Krupper	7.2.50.1
51	Robert C. Balsam	7.2.51.1
52	Michael S. Motsch	7.2.52.1
53	James Dale Malody	7.2.53.1
54	Jared Hall	7.2.54.1
55	Tom Fitzsimmons	7.2.55.1
56	Mark Fisher	7.2.56.1
57	Gary M. Lewis	7.2.57.1
58	Gene R. George, Agent for Yates Petroleum Corp.	7.2.58.1
59	Weatherford	7.2.59.1
60	Archie Johnson	7.2.60.1
61	Brad Funston	7.2.61.1
62	Heather Pence	7.2.62.1
63	Darlene McKnight	7.2.63.1
64	Charles Ohlson	7.2.64.1
65	Jon Salomonsen	7.2.65.1
66	Cynthia A. Truby	7.2.66.1
67	Eric Ward	7.2.67.1
68	Jerry L. Guthrie	7.2.68.1
69	Edward I. Hill	7.2.69.1
70	Jeffrey T. Harvey	7.2.70.1
71	Mark L. Dobson	7.2.71.1
72	Craig Barber	7.2.72.1
73	Tim Tipton	7.2.73.1
74	Joseph C. Icenogle	7.2.74.1
75	Sandy Puettman	7.2.75.1
76	William L.M. Wilsey	7.2.76.1
77	Mike Blevins	7.2.77.1
78	Dan Haman	7.2.78.1
79	Lyle Laverty, Regional Forester, U.S. Forest Service	7.2.79.1
80	Kirk Steinle, BP Amoco	7.2.80.1
81	Kim Floyd, Wyoming Wildlife Federation	7.2.81.1
82	David S. Petrie, Union Pacific Resources	7.2.82.1
83	Oliver D. Ihasz	7.2.83.1
84	Carolyn Byrd and Jeff Kessler, Wyoming Outdoor Council	7.2.84.1
85	Jeff Kessler, Biodiversity Associates	7.2.85.1
86	Marc W. Smith, Independent Petroleum Association of Mountain States	7.2.86.1
87	Conrad A. Lass, Office of Federal Land Policy, State of Wyoming	7.2.87.1
88	Bill Wichers, Wyoming Game and Fish Department	7.2.88.1
89	David S. Benner, State Engineer's Office	7.2.89.1
90	Lance Cook, Wyoming State Geological Survey	7.2.90.1
91	Darla Potter, Wyoming Department of Environmental Quality/Air Quality Division	7.2.91.1
92	Timothy R. Morris, Santa Fe Snyder Corporation	7.2.92.1
93	Cynthia Cody, U.S. Environmental Protection Agency	7.2.93.1
94	Michael M. Long, U.S. Fish and Wildlife Service	7.2.94.1

Table 7.5 General Subject Matter of DEIS Comment Letters, Continental Divide/Wamsutter II Project, Sweetwater and Carbon Counties, Wyoming.

	General Subject Matter of Comment Letter															
Letter Number[1]	Air Quality	Geology/ Minerals/ Paleontology	Soils	Water Resources	Noise/ Odor	Transportation	Vegetation	Wildlife/ Fisheries	TEC&SC[2]	Cultural Resources	Socioeconomics	Livestock/ Grazing	Recreation	Visual Resources	Hazardous Materials	Cumulative Impacts
1											X					
2								X						X		
3											X					
4	X										X					
5																
6		X														
7											X					
8											X					
9				X	X			X	X							X
10											X					
11											X					
12											X					
13											X					
14											X					
15											X					
16												X	X	X		
17												X	X	X		
18	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
19						X	X		X		X					
20											X					
21											X					
22											X					
23											X					
24											X					
25											X					
26											X					
27								X			X					
28											X					

Table 7.5 (Continued)

Letter Number[1]	General Subject Matter of Comment Letter															
	Air Quality	Geology/ Minerals/ Paleontology	Soils	Water Resources	Noise/ Odor	Transportation	Vegetation	Wildlife/ Fisheries	TEC&SC[2]	Cultural Resources	Socioeconomics	Livestock/ Grazing	Recreation	Visual Resources	Hazardous Materials	Cumulative Impacts
29								X			X					
30	X															
31											X					
32											X					
33	X															
34								X								
35											X					
36											X					
37											X					
38											X					
39											X					
40											X					
41											X					
42											X					
43											X					
44											X					
45											X					
46											X					
47	X							X			X					
48	X							X			X					
49											X					
50											X					
51	X															
52								X								
53											X					
54											X					

Table 7.5 (Continued)

	General Subject Matter of Comment Letter																
Letter Number[1]	Air Quality	Geology/ Minerals/ Paleontology	Soils	Water Resources	Noise/ Odor	Transportation	Vegetation	Wildlife/ Fisheries	TEC&SC[2]	Cultural Resources	Socioeconomics	Livestock/ Grazing	Recreation	Visual Resources	Hazardous Materials	Cumulative Impacts
55											X					
56											X					
57	X										X					
58	X	X	X	X	X	X	X	X		X				X		
59											X					
60	X							X	X		X					
61											X					
62											X					
63											X					
64											X					
65	X										X					
66								X								
67	X							X						X		
68											X					
69											X					
70											X					
71	X							X			X					
72																
73											X					
74	X							X			X					
75								X			X					
76	X							X			X					
77						X										
78											X					
79	X															
80	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X
81	X				X			X	X				X	X		X
82	X										X					

Table 7.5 (Continued)

Letter Number[1]	General Subject Matter of Comment Letter																
	Air Quality	Geology/ Minerals/ Paleontology	Soils	Water Resources	Noise/ Odor	Transportation	Vegetation	Wildlife/ Fisheries	TEC&SC[2]	Cultural Resources	Socioeconomics	Livestock/ Grazing	Recreation	Visual Resources	Hazardous Materials	Cumulative Impacts
83	X													X		
84	X			X	X			X	X	X		X	X	X		X
85				X		X	X	X	X				X	X		X
86	X										X					
87	X	X						X			X					
88				X	X			X	X							X
89				X												
90		X														
91	X															
92	X							X								X
93	X															X
94				X				X	X							X

[1] Please refer to Table 7.4 for commentor name and FEIS section number.
[2] TEC&SC = Threatened, Endangered, Candidate and Species of Concern.

7.2.1.1 Letter 1 - Den Constantino, Sweetwater Economic Development Association

SWEETWATER ECONOMIC DEVELOPMENT ASSOCIATION

SWEDA

P.O. Box 1166
Rock Springs, Wyoming 82902
(307) 352-6874
Fax (307) 352-6876

May 27, 1999

Clare Miller
Rawlins Field Office
Bureau of Land Management
P. O. Box 2407
Rawlins, Wyoming 82301

Dear Mr. Miller;

The Board of Directors of the Sweetwater Economic Development Association would like to voice its support for the proposed action in the Draft Environmental Impact Statement for the Continental Divide/Wamsutter II Natural Gas Project.

Responsible development of our natural resources in the proposed area represents the lifeblood of both Carbon and Sweetwater County. The tax base and the employment provided by the project will help maintain a stronger economic base.

We are comfortable with the analysis of impact from both socio-economic and environmental issues, and urge the project move forward.

Sincerely,

Den Costantino
Director

RECEIVED
JUN - 1 1999
BUREAU OF LAND MANAGEMENT
RAWLINS FIELD OFFICE

Sweetwater County... by choice

7.2.2.1 Letter 2 - Larry DiBrito

5915 W 59 ST
CHICAGO, IL
60638

RECEIVED
JUN - 1 1999
BUREAU OF LAND MANAGEMENT
RAWLINS FIELD OFFICE

Dear sir

We must not go so fast, we must let our time sit so longer NIT
A16-11 to make sure Wallbay oil, coal, and mining Tara We must cut this Nation
1 Not

Please pass bills to save Wilderness Wyoming History and also Wildlife Too

We Need gas oil Coal We must go to ND, SD, OREGON MONTANA UTAH NEBRASKA NEVADA OKLAHOMA TEXAS WASHINGTON TO on these BLM LAND and all over the USA

7.2.1.2 Letter 1 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

Letter 2 - Larry DiBrito, Page 2

please save Wyoming Wonders to Wilderness

RECEIVED JUN 1 1999 BUREAU OF LAND MANAGEMENT RAWLINS FIELD OFFICE

We must go in to
SOLAR POWER
WASTE TO ENERGY
GARBAGE
SLUDGE

Wyoming must save its BLM WONDERS PLEASE ACT

Larry DiBrito

and this vote Wyoming will become a No Vote land of and Gas Wilderness and Mining please cut this in Half

7.2.2.2 Letter 2 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

Comment Response 1 - The BLM believes that the proposed project provides clean energy to meet the nation's needs while giving adequate protection to environmental values. The BLM is mandated by law to make federal energy resources available, as well as to protect the environment.

7.2.3.2 Letter 3 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

7.2.3.1 Letter 3 - Jo Suftko, President, Rock Springs Chamber of Commerce

1897 Dewar Drive, P. O. Box 598, Rock Springs, Wyoming 82902-0598
Phone: (307) 362-3771 (800) 46-DUNES Fax: (307) 362-3838

June 1, 1999

Clare Miller
Rawlins Field Office
Bureau of Land Management
PO Box 2407
Rawlins, WY 82301-2407

Dear Mr. Miller,

The Rock Springs Chamber of Commerce supports the Proposed Action in the Draft Environmental Impact Statement for the Continental Divide/Wamsutter II Natural Gas Project in Sweetwater and Carbon Counties.

The operators and the Bureau have done a thorough job of identifying the impacts and the appropriate mitigation.

We find the socio-economic analysis accurate and compelling.

We find the continued development of these fields, as proposed in the EIS, important to maintaining the quality of life in the City of Rock Springs and the region.

Please accept our support for the Proposed Action.

Sincerely,

Jo Suftko

Jo Suftko, President
Rock Springs Chamber

RECEIVED
JUN - 2 1999
BUREAU OF LAND MANAGEMENT
RAWLINS FIELD OFFICE

Rock Springs Chamber of Commerce
Sweetwater County This is the Life

7.2.4.1 Letter 4 - Randy Shipman, People for the USA/ Flaming Gorge Chapter

RECEIVED
JUN 10 1999
BUREAU OF LAND MANAGEMENT
RAWLINS FIELD OFFICE

06/08/1999

Clare Miller, Team Leader
Rawlins Field Office
Bureau of Land Management
P.O. Box 2407
Rawlins, WY 82301-2407

People For the USA
Flaming Gorge Chapter
Rock Springs, Wyoming

Clare Miller:

Reference: Federal Register: April 30, 1999 (Vol. 64, No. 83)[Page 23349]-Comment Period. Continental Divide/Wamsutter II Natural Gas Project. Draft Environmental Impact Statement.

At the May 25, 1999 public meeting in the Rock Springs Office BLM conference room it was nice to hear the closing statement of your summation. We agree that the Proposed Action is compatible with management objectives and on significant impacts are anticipated.

PFUSA, Flaming Gorge Chapter represents area peoples who are in support of strong communities, vigorous economies and healthy environments. We appreciate the local BLM officers in their endeavor to enhance the continuation of multiple use management on federal public lands for oil and gas production as well as livestock grazing, mining, recreation and water development activities. We also believe in the concept to provide a BALANCE of environmental responsibility and economic benefit for all Americans.

On June 3, 1999, President Clinton issued Executive Order 13123 [Fed. Reg: 6/8/99 (Vol.64, No. 109)[Page 30649-30660]---Greening the Government Through Efficient Energy Management. This document concerns the so-called Greenhouse effect and is a declaration for energy efficient means to power the federal machine.

Renewable energies such as biomass, geothermal, solar and wind power are not presently, nor in the near future a viable means to keep our nation running. While the technology is available for integrated whole building designs for the above power generation the fact remains that clean natural gas must pull the load of America.

Section 404. (a) of EO 13123 states, "Agencies shall take advantage of competitive opportunities in the electricity and natural gas markets to reduce costs and enhance services." This statement is a strong incentive for the CD/WAMI Proposed Project to go forth with thought also to increased pipeline capacity and distribution.

Letter 4 - Randy Shipman, People for the USA/Flaming Gorge Chapter, Page 2

Western Wyoming Community College-Archeology Department for the most part is self-sufficient. Most of their operations capital is derived from the oil and gas industries.

Sweetwater County property taxes paid in Fiscal Year 1998 totaled $79,405,274.66. Of the total amount paid, 30 local companies contributed $2.3828% or $65,416,293.36. This list, (attached) was obtained from the Sweetwater County Treasurer. Of the taxes paid by those on the attached list, about 62% of the monies go to all Sweetwater county public schools. Should one include WWCC with School District 1 the figure is about 68% and School District 2 about 70%. Total assessed reports (July 10, 1998) from the schools were $44,008,748.35 plus $5.8M for WWCC-see enclosures.

The Operators historical use of public lands in this area is admirable as relates to the environment. The CD/WAM II project area has by tradition been an oil and gas area. There does not appear to be excessive roads and in some instances the road structure is such that intrusion SO may be less impacted than planned.

Summary:
The industrialized nations must adhere more stringently to the Montreal Protocol and Title VI of the Clean Air Act Amendments of 1990. This Act and Protocol will necessitate a higher demand for natural gas to meet our obligations over the next 20 years. In conjunction with the increased demand as a result of the Clean Air Act, natural gas and the pipelines to distribute it to all parts of the nation must be on line.

The Public's interest and the National security are better served by an abundance of fuels for energy. It takes energy to build schools, fight wars and keep the lights on in the halls of Congress.

PFUSA, Flaming Gorge Chapter looks forward to working with the BLM.
Thank you.

Randy Shipman -President
- Phone: Work 307-362-8345
Home 307-382-8107

PFUSA-Flaming Gorge Chapter
P.O. Box 1063
Rock Springs, WY 82902-1063

Enc: School Dist. No. 1, 1C, 2 and WWCC

Letter 4 - Randy Shipman, People for the USA/Flaming Gorge Chapter, Attachment 1

SWEETWATER COUNTY TOP 30 TAXPAYERS - TAX YEAR 1998		
COMPANY	TAXES PAID	% OF TOTAL
1. Amoco Production & Pipeline	$ 7,870,055.52	9.9113%
2. FMC	$ 7,408,291.60	9.3816%
3. UP Resources	$ 5,786,692.62	7.2875%
4. Solvay Minerals	$ 5,439,345.00	6.8501%
5. General Chemical Corporation	$ 4,625,498.20	5.8239%
6. OCI	$ 4,422,749.50	5.5698%
7. Bridger Coal	$ 4,408,798.28	5.5523%
8. Pacificorp	$ 3,914,583.64	4.9299%
9. TG Soda Ash, Inc.	$ 2,957,346.52	3.7248%
10. Wexpro	$ 2,241,903.82	2.8234%
11. Texaco	$ 1,924,009.80	2.4230%
12. Cabot Oil & Gas Production	$ 1,828,712.38	2.3030%
13. Black Butte Coal	$ 1,794,274.66	2.2596%
14. TBI Exploration	$ 1,276,246.20	1.6073%
15. Idaho Power	$ 1,138,765.00	1.4341%
16. Celtic Energy Company	$ 822,033.08	1.0352%
17. UP Railroad	$ 765,760.80	0.9644%
18. Marathon Oil	$ 739,582.44	0.9314%
19. Questar Pipeline	$ 696,354.28	0.8770%
20. UMC Petroleum	$ 609,217.12	0.7672%
21. CIG	$ 550,470.48	0.6932%
22. HS Resources	$ 521,431.82	0.6567%
23. Snyder Oil	$ 490,666.40	0.6179%
24. Church & Dwight	$ 464,309.22	0.5847%
25. SF Phosphates	$ 457,470.48	0.5761%
26. Abraxas Petroleum	$ 452,221.34	0.5695%
27. Mountain Gas Resources	$ 446,535.56	0.5624%
28. Exxon	$ 424,006.94	0.5340%
29. Husa Oil	$ 368,112.00	0.4640%
30. Williams Gas Processing	$ 365,550.66	0.4604%
TOTAL	$ 65,416,293.36	82.3828%
TOTAL TAXES PAID IN SWEETWATER COUNTY	$ 79,405,274.66	100.0000%

Letter 4 - Randy Shipman, People for the USA/Flaming Gorge Chapter, Attachment 2, Page 1

DATA/TECHNOLOGY UNIT
Wyoming Department of Education
Hathaway Building, 2nd Floor
2300 Capitol Avenue
Cheyenne, WY 82002-0050

District # 1

1997-98

Sweetwater County

RECEIVED
JUN 10 1999
BUREAU OF LAND MANAGEMENT
RAWLINS FIELD OFFICE

Form Revised 6/97

Due Date July 10, 1998

Totals shown on this report must balance with the total of the figures reported on the monthly reports previously issued to school districts. Include veterans ... in the tax source from which it is derived. Round amounts to the nearest dollar.

COUNTY TREASURER'S REPORTING FORM

Line	Code	Item				Amount
AUTHORIZING ENTITY - LOCAL SCHOOL DISTRICT						
1	81111	District Property Tax (25 mills unified 20 mills non-unified) (from property tax assessed after June 30, 1991) (W.S. 21-13-102(a)(i)(A) or (ii)(A), and W.S. 21-13-31-(d))				
		Current	11,857,953.38	Post Delinquent	189,499.46	12,047,452.84
2	81111	District Property Tax(25 mills unified, 20 mills non-unified)(from property assessed prior to July 1, 1991)(W.S. 21-13-102(a)(ii")(A) or (ii)(A), and W.S. 21-13-313(d).				
		Special	3,753.50	Interest	4,467.67	
		Optional 1 mill	150.13	Interest	178.69	
		Voter2 mill		Interest		
		Maint. 1 mill	84.74	Interest	78.66	
		Maint. 3 mill		Interest		8,713.39
3	81111	District Property Tax(25 mills or 20 mills) paid from the county general fund pursuant to the tax deferral provisions under W.S. 39-3-301(f).				
		Current 3 mill				
4	81113	Add'l local board approved 3 mill operations levy (W.S. 21-13-102(a)(i)(d) or (ii)(E))				
		Current 3 mill	1,423,259.85	Post delinquent		
		Voter 3 mill	11,729.71	Post delinquent opt. 1	7,580.62	1,442,570.18
5	81113	Tuition levy (5 mill non-unified districts)(W.S.21-13-102(a)(ii)(e).)				
6	81114	Tuition levy (5 mill non-unified districts) paid from the county general fund to the tax deferral provisions under W.S. 39-3-301(f).				
7	81115	Add'l. Board approved 3 mill maintenance levy (W.S. 21-13-102(a)(i)(E) or (ii)(F))				
		Current 3 mill	1,423,259.87	Post delinquent		
		Voter 2 mill		Post delinquent opt. 1	7,580.62	1,430,840.49
8	81120	Motor vehicle registration fees				
		Special	1,013,703.51	Maint. 3 mill	121,644.43	
		Optional 3 mill	121,644.43			1,256,992.37
9	81130	Car company taxes.				
		Special	54,131.45	Maint. 3 mill	6,495.78	
		Optional 3 mill	6,495.78			67,123.01
10	81140	Penalties and interest on delinquent taxes				
		Curr. Special	8,409.12	Delinq. Opt. 1 mill	1,129.69	
		Curr. Opt. 3 mill	1,008.72	Delinq. Maint. 2 mill		
		Delinq. Special	28,246.76	Delinq. Voter 3 mill	914.01	
		Delinq. Maint. 1 mill	1,129.70	Curr. Maint. 3 mill	1,009.14	41,847.14
11	81160	Vocational-Terminal-Adult (2 ½ mills maximum) (W.S. 21-12-103).				
12	81170	Board of Cooperative Educational Services (½ mill maximum) (W.S.21-20-109(a))				
13	81171	Board of Cooperative Educational Services(2 mill maximum) (W.S. 21-20-110(a))				
14	81190	Other (identify)				
		Vets Ex. Special	11,074.03	Rental cars opt 3mill	64.03	
		Vets Ex. Opt 3 mill	1,328.89	Rental cars special	533.60	
		Vets maint. 3 mill	1,328.89	Rental cars maint. 3 mill	64.03	
		Prorate fee special	56,660.80	Mobile eq. Special.		
		Prorate fee opt 3 mill	6,799.29	Mobile eq. Opt 3 mill		
		Prorate fee maint. 3 mill	6,799.29	Mobile maint. 3 mill		
		Trahm opt. 3 mill	273.52			
		Trahm special	2,278.88			
		Tram maint. 3 mill	273.52			87,478.77
15		TOTAL LOCAL (Sum of lines 1 thru 14)				16,383,018.19

Letter 4 - Randy Shipman, People for the USA/Flaming Gorge Chapter, Attachment 2, Page 2

LINE	CODE	ITEM				AMOUNT
16	81590	Interest earned on school district funds				
		NOW special	38,162.47	Auto fund special	19,998.33	
		NOW opt. 3 mill	4,579.47	Auto fund opt 3 mill	2,399.80	
		NOW opt. Maint. 3 mill	4,188.39	Auto fund maint. 3 mill	2,399.80	
		NOW 6 mill	10,943.94	Auto fund 6 mill	4,418.07	
		NOW fines	2,754.10			
		TOTAL INTEREST EARNED ON SCHOOL DISTRICT FUNDS				89,844.37
AUTHORIZING ENTITY-COUNTY						
17	82110	County wide school property tax (6 mills) (from property assessed after June 30, 1991) (W.S. 21-13-201)				
		Current	3,935,264.61	Post delinquent	52,579.15	3,987,843.76
18	82110	County wide school property tax (6mills) (from property assessed prior to July 1, 1991) (W.S.21-13-201)				
		Pre delinquent	4,968.09	Interest	1,678.04	6,646.13
19	82110	County wide school property tax (8 mills) paid from county general fund pursuant to the tax deferral provisions under W.S. 39-3-301(f).				
20	82120	Motor vehicle registration fees				223,161.16
21	82130	Car company tax				10,380.36
22	82140	Penalties and interest on delinquent taxes				
		Current	1,450.37	Delinquent	8,511.43	9,961.80
23	82150	Fines and forfeitures				447,979.22
24	82160	Forest reserve fees				336.09
25	82190	Other (identify)				
		Vets exempt	2,568.27	Rental cars	125.73	
		Prorate fees	13,352.12	Trahms	410.94	
		Mobile equipment				16,457.06
26		TOTAL COUNTY (SUM OF LINES 17-25)				4,702,765.58
AUTHORIZING ENTITY-STATE						
27	83130	Taylor grazing fees				
28	83190	Other (identify)				
29		TOTAL STATE (sum of lines 27-28)				
30		TOTAL OF ALL ENTITIES (sum of lines 15,16,26 and 29) + 37				22,563,394.80

Only levies and payments for new and refunding bond issues should be reported on this form. Levies and payments for refunded (deceased) bond issues should not be reported!

LINE	CODE	ITEM	AMOUNT
BONDED DEBT REVENUES			
31	81200	Levy for bond redemption	0.00
32	81200	Levy for bond interest	0.00
33		Other (identify)	0.00
34		TOTAL BONDED DEBT REVENUES (sum of lines 33 thru)	0.00
BONDED DEBT EXPENDITURES			
35	6100	Payments on bond principal	989,408.31
36	6100	Payments on bond interest	398,358.35
37		TOTAL BONDED DEBIT EXPENDITURES	1,387,766.66

Mill levy supplement-per W.S. 21-15-103, we need to know the amount and date funds were received from school districts and the amount and date these funds were paid on the debt service.

LINE	CODE	ITEM	DATE	AMOUNT
38		Received from the school district		0.00
39		Paid against the debt service		0.00

W.S. 21-13-715 States that the code treasurer shall pay the principal and interest of any bonds issued under this article (21-13-701 to 21-13-721) by each school district, when the same becomes due, and all amounts so paid must be reported to the school district board of trustees at the next meeting thereafter.

School District funds (other than bonded debt) on hand (i.e., collected by county but not distributed) on June 30, 1997

LINE	CODE	ITEM	AMOUNT
40	81000	Local revenues	163,211.08
41	82000	County revenues (estimate only,new 6 mill distribution not available)	53,354.93
42	83000	State revenues	
43		TOTAL ON HAND (sum of lines 41 thru 43)	216,566.01

Signature of County Treasurer [signature] Date 9-9-98 Telephone (307) 872-4384

DATA/TECHNOLOGY UNIT
Wyoming Department of Education
Hathaway Building, 2nd Floor
2300 Capitol Avenue
Cheyenne, WY 82002-0050

Form Revised 6/97

1997-98

District # 1C Sweetwater County

Due Date July 10, 1999

RECEIVED
JUN 10 1999
BUREAU OF LAND MANAGEMENT
RAWLINS FIELD OFFICE

Totals shown on this report must balance with the total of the figures reported on the monthly reports previously issued to school districts. Include veterans and ... from which it is derived. Round amounts to the nearest dollar.

COUNTY TREASURER'S REPORTING FORM

Line	Code	Item				Amount
AUTHORIZING ENTITY - LOCAL SCHOOL DISTRICT						
1	81(11)	District Property Tax (23 mills unified 20 mills non-unified) (from property tax assessed after June 30, 1991) (W.S. 31-13-102(a)(i)(A) or (ii)(A), and W.S. 21-13-31-(d))				
		Current	1,516,437.13	Post Delinquent	876.62	1,517,313.75
3	81111	District Property Tax(25 mills unified, 20 mills non-unified)(from property assessed prior to July 1, 1991) (W.S. 31-13-102(a)(i")(A) or (ii)(A), and W.S> 31-13-313(d).				
		Special	10.92	Interest	11.09	
		Optional 1 mill	.44	Interest	.44	
		Voter2 mill	.88	Interest	.88	
		Maint. 1 mill	.44	Interest	.44	
		Maint. 2 mill	.44	Interest	.44	26.41
3	81111	District Property Tax(23 mills or 20 mills) paid from the county general fund pursuant to the tax deferral provisions unser W.S. 39-3-301(f).				
		Current 3 mill				
4	81113	Add'l local board approved 3 mill operations levy (W.S. 21-13-102(a)(i)(d) or (ii)(E)				
		Current 3 mill	181,959.70	Post delinquent		
		Voter 2 mill	69.79	Post delinquent opt. 1	34.85	182,064.34
5	81113	Tuition levy (3 mill non-unified districts) (W.S.21-13-102(a)(ii)(a).)				
6	81114	Tuition levy (5 mill non-unified districts) paid from the county general fund to the tax deferral provisions under W.S. 39-3-301(f).				
7	81115	Add'L Board approved 3 mill maintenance levy (W.S. 21-13-102(a)(i)(E) or (ii)(F))				
		Current 3 mill	181,959.70	Post delinquent		
		Voter 2 mill	69.79	Post delinquent opt. 1	34.85	182,064.34
8	81120	Motor vehicle registration fees				
		Special	132.06	Maint. 3 mill	15.84	
		Optional 3 mill	15.84			163.74
9	81126	Car company taxes.				
		Special		Maint. 3 mill		
		Optional 3 mill				
10	81140	Penalties and interest on delinquent taxes				
		Curr. Special	1.22	Delinq. Opt. 1 mill	9.15	
		Curr. Opt. 3 mill	.14	Delinq. Maint. 2 mill	18.31	
		Delinq. Special	228.75	Delinq. Voter 3 mill	18.31	
		Delinq. Maint. 1 mill	9.14	Curr. Maint. 3 mill	.14	285.16
11	81160	Vocational-Terminal-Adult (2 ½ mills maximum) (W.S. 31-12-103).				
12	81170	Board of Cooperative Educational Services (½ mill maximum) (W.S.21-20-109(a))				60,848.61
13	81171	Board of Cooperative Educational Services(2 mill maximum) (W.S. 21-20-110(a))				
14	81190	Other (identify)				
		Vets Ex. Special	51.75	Rental cars opt.3mill	.26	
		Vets Ex. Opt 3 mill	6.21	Rental cars special	2.15	
		Vets maint. 3 mill	6.21	Rental cars maint. 3 mill	.26	
		Prorate fee special	229.40	Mobile eq. Special.		
		Prorate fee opt 3 mill	27.53	Mobile eq. Opt 3 mill		
		Prorate fee maint. 3 mill	27.53	Mobile maint. 3 mill		
		Trahm opt. 3 mill	2.80			
		Trahm special	23.26			
		Tram maint. 3 mill	2.80			380.16
15		TOTAL LOCAL (Sum of lines 1 thru 14)				1,943,146.51

	CODE	ITEM				AMOUNT
16	81390	Interest earned on school district funds				
		NOW special	3,318.46	Aum fund special	3.00	
		NOW opt. 3 mill	398.21	Aum fund opt 3 mill	.37	
		NOW opt. Maint. 3 mill	398.21	Auto fund maint. 3 mill	.37	
		NOW 8 mill	43.39	Aum fund 6 mill	17.51	
		NOW fines	10.92			4,190.44
		TOTAL INTEREST EARNED ON SCHOOL DISTRICT FUNDS				
AUTHORIZING ENTITY-COUNTY						
17	82110	County wide school property tax (8 mills) (from property assessed after June 30, 1991) (W.S. 21-13-201)				
		Current	15,506.73	Post delinquent	204.02	15,710.75
18	82110	County wide school property tax (6mills) (from property assessed prior to July 1, 1991) (W.S.21-13-301)				
		Pre delinquent	19.70	Interest	6.67	26.37
19	83110	County wide school property tax (8 mills) paid from county general fund pursuant to the tax deferral provisions under W.S. 39-3-301(f).				
20	82120	Motor vehicle registration fees				884.82
21	82130	Car company tax				41.15
22	83140	Penalties and interest on delinquent taxes				
		Current	5.75	Delinquent	33.75	39.50
32	82150	Fines and forfeitures				1,776.05
34	82160	Forest reserve fees				5.60
25	83190	Other (identify)				
		Vets exempt	10.18	Rental cars	.50	
		Prorate fees	52.94	Trahms	1.63	
		Mobile equipment				65.25
26		TOTAL COUNTY (SUM OF LINES 17-25)				18,549.49
AUTHORIZING ENTITY-STATE						
27	83130	Taylor grazing fees				
28	83190	Other (identify)				
29		TOTAL STATE (sum of lines 27-28)				
30		TOTAL OF ALL ENTITIES (sum of lines 15,16,26 and 39)				1,965,886.44

...vies and payments for new and refunding bond issues should be reported on this form. Levies and payments for refunded (deceased) bond issues should not be reported!

...E	CODE	ITEM	AMOUNT
...DED DEBT REVENUES			
31	81200	Levy for bond redemption	0.00
32	81200	Levy for bond interest	0.00
33		Other (identify)	0.00
34		TOTAL BONDED DEBT REVENUES (sum of lines 33 thru)	0.00
...DED DEBT EXPENDITURES			
35	8100	Payments on bond principal	7,108.07
36	6100	Payments on bond interest	
37		TOTAL BONDED DEBIT EXPENDITURES	7,108.07

• supplement-per W.S. 21-13-105, we need to know the amount and date funds were received from school districts and the amount and date these funds were paid on the debt service.

	CODEL	ITEM	DATE	AMOUNT
38		Received from the school district		0.00
39		Paid against the debt service		0.00

-713 States that the ... treasurer shall pay the principal and interest of any bonds issued under this article (21-13-701 to 21-13-721) by such school district, when the same becomes due, and all amounts so paid must be reported ... district board of trustees at the next meeting thereafter.

...ns funds (other than bonded debt) on hand (i.e., collected by county but not distributed) on June 30, 1997

...R	CODE	ITEM	AMOUNT
40	81000	Local revenues	231.54
41	82000	County revenues (estimate only, new 6 mill distribution not available)	211.55
42	83000	State revenues	
43		TOTAL ON HAND (sum of lines 41 thru 43)	443.09

County Treasurer [signature] Date 7-10-98 Telephone (307) 872-6384

Wyoming Department of Revenue
Ridership Building, 3rd Floor
1100 Capitol Avenue
Cheyenne, WY 82002-0060

1997-98

District # 2 — Sweetwater County

RECEIVED
JUN 10 1998
BUREAU OF LAND MANAGEMENT
RAWLINS FIELD OFFICE

Due Date July 10, 1998

Totals shown on this report must balance with the total of the figures reported on the monthly reports previously issued to school districts. Include corrections for any prior months that may be involved. Round amounts to the nearest dollar.

COUNTY TREASURER'S REPORTING FORM

Line	Code	Item				Amount
		AUTHORIZING ENTITY - LOCAL SCHOOL DISTRICT				
1	01111	District Property Tax (25 mills-unified 50 mills non-unified)(from property tax assessed after June 30, 1991) (W.S. 21-13-102(c)(ii)(A) or (B)(A), and W.S. 21-13-316(d))				
		Current	13,399,849.74	Past Delinquent	172,880.41	13,572,730.15
2	01112	District Property Tax(25 mills-unified, 20 mills non-unified)(from property assessed prior to July 1, 1991)(W.S. 21-13-102(c)(ii)(B)(I) or (B)(A), and W.S. 21-13-316(d)).				
		Special	30,060.96	Interest	6,962.25	
		Optional 1 mill	1,202.50	Interest	278.50	
		Vencil mill		Interest		
		Maint. 1 mill	1,197.36	Interest	270.89	
		Maint. 2 mill		Interest		39,972.46
3	01113	District Property Tax(25 mills or 20 mills) paid from the county general fund pursuant to the tax deferral provisions under W.S. 39-3-303(b)				
		Current 2 mill	1 CO MTH.03			
4	01412	Addt'l bond issued approved 2 mill equalization levy (W.S. 21-13-102(c)(ii)(C)(I)) or (II)(I)				
		Current 2 mill	1,602,978.03	Past delinquent	208.53	
		Voter 2 mill		Past delinquent opt. 1	6,706.67	1,609,893.23
5	01115	Tuition levy (2 mill non-unified districts) (W.S.21-13-102(c)(ii)(E)(I))				
6	01114	Tuition levy (2 mill non-unified districts) paid from the county general fund to the tax deferral provisions under W.S. 39-3-303(f).				
7	01119	Addt'l. Bond approved 3 mill maintenance levy (W.S. 21-13-102(c)(ii)(E) or (I)(II))				
		Current 3 mill	541,678.98	Past delinquent	208.53	
		Voter 2 mill		Past delinquent opt. 1	6,706.67	548,594.18
8	01120	Motor vehicle registration fees				
		Special	504,786.79	Maint. 3 mill	20,191.47	
		Optional 3 mill	60,574.41			585,552.67
9	01230	Car company taxes				
		Special	16,507.37	Maint. 3 mill	660.30	
		Optional 3 mill	1,980.88			19,148.55
10	01140	Penalties and interest on delinquent taxes				
		Curr. Special	3,131.55	Delinq. Opt. 1 mill	1,177.49	
		Curr. Opt. 2 mill	414.53	Delinq. Maint. 2 mill		
		Delinq. Special	29,444.42	Delinq. Voter 2 mill		
		Delinq. Maint. 2 mill	1,177.49	Curr. Maint. 2 mill	138.12	35,483.60
11	01150	Vocational-Technical Addt.(2 ¼ mills-unadvanced) (W.S. 21-13-103).				
12	01170	Bond of Cooperative Educational Services (2 mill maximum) (W.S.21-20-109(c))				
13	01171	Bond of Cooperative Educational Services(2 mill maximum)(W.S. 21-20-110(a))				
14	01190	Other (Identify)				
		Vets Ex. Special	6,351.44	Rental vets opt.3mill	38.39	
		Vets Ex. Opt 2 mill	677.43	Rental vets special	319.92	
		Vets maint. 2 mill	338.81	Rental vets maint. 2 mill	12.80	
		Forests-Sp special	33,971.73	Mobile eq. Special		
		Forests-Sp opt 2 mill	4,076.60	Mobile eq. Opt 1 mill		
		Forests-Sp maint. 2 mill	1,358.87	Mobile maint. 2 mill		
		Trailer opt. 2 mill	59.30			
		Trailer special	494.22			
		Trailer maint. 2 mill	19.82			47,719.33
15		TOTAL LOCAL (Sum of lines 1 thru 14)				16,469,004.17

LINE	CODE	ITEM				AMOUNT
15	01150	Interest earned on school district funds				
		NOW special	32,223.88	Auto fund special	10,063.83	
		NOW opt. 2 mill	3,400.14	Auto fund opt 2 mill	460.10	
		NOW opt. Maint. 2 mill	1,288.95	Auto fund maint. 2 mill	1,150.11	
		NOW 6 mill	6,886.45	Auto fund 6 mill	2,780.07	
		NOW fees	1,733.03			
		TOTAL INTEREST EARNED ON SCHOOL DISTRICT FUNDS				59,986.56
		AUTHORIZING ENTITY-COUNTY				
17	03110	County wide school property tax (6 mills) (from property assessed after June 30, 1991)(W.S. 21-13-201)				
		Current	2,476,252.49	Past delinquent	33,511.63	2,509,764.12
24	03120	County wide school property tax (6mills)(from property assessed prior to July 1, 1991)(W.S.21-13-201)				
		Pre delinquent	3,127.66	Interest	1,058.48	4,186.14
19	03110	County wide school property tax (6 mills) paid from county general fund pursuant to the tax deferral provisions under W.S. 39-3-303(f)				140,423.45
20	00150	Motor vehicle registration fees				6,531.02
24	02130	Car company tax				
23	00170	Penalties and interest on delinquent taxes				
		Current	912.71	Delinquent	5,380.24	6,292.95
22	03150	Fines and Forfeitures				282,616.44
24	03152	Forest reserve fees				210.66
25	03200	Other (Identify)				
		Vets exempt	1,616.09	Rental vets	78.13	
		Private fees	8,401.79	Trailers	258.59	
		Mobile equipment				10,355.60
26		TOTAL COUNTY (SUM OF LINES 17-25)				2,960,386.98
		AUTHORIZING ENTITY-STATE				
27	03130	Taylor grazing fees				
28	00130	Other (Identify)				
29		TOTAL STATE (sum of lines 27-28)				2,479,467.71
30		TOTAL OF ALL ENTITIES (sum of lines 15,16,26 and 29)				19,479,467.71

Only levies and payments for new and refunding bond issues should be reported on this form. Levies and payments for refunded (discount) bond issues should not be reported

LINE	CODE	ITEM	AMOUNT
		BONDED DEBT REVENUES	
31	01200	Levy for bond redemption (per letter County Assessor)	1,372,314.28
32	01200	Levy for bond interest (per letter County Assessor)	1,810,596.96
33		Other (Identify) NA	
34		TOTAL BONDED DEBT REVENUES (sum of lines 33 thru)	1,810,596.96
		BONDED DEBT EXPENDITURES	
35	0150	Payments on bond principal	1,500,000.00
36	0150	Payments on bond interest	1,937,242.50
37		TOTAL BONDED DEBT EXPENDITURES	3,437,242.50

Addt levy supplement-per W.S. 21-13-105, we need to know the amount and date funds were received from school districts and the amount and date those funds were paid on the debt service

LINE	CODE	ITEM	DATE	AMOUNT
38		Received from the school district		0.00
39		Paid against the debt service		0.00

W.S. 21-13-315 Items that the state treasurer shall pay the principal and interest of any bonds issued under this article (21-13-301 to 21-13-321) by each school district, when the same becomes due, and all amounts so paid must be reported in the school district board of trustees at the next meeting thereafter.

School District funds (other than bonded debt) received (i.e., authorized by county but not distributed) on June 7 , 1997

LINE	CODE	ITEM	AMOUNT
40	31000	Local revenues	16,606.65
41	32000	County revenues (estimate only, new 6 mill distribution not available	33,573.41
42	33000	State revenues	
43		TOTAL OF SUMS (sum of lines 41 thru 42)	48,178.06

Signature of County Treasurer: David S. Ross — Date: 7-9-98 — Telephone (307) 872-6384

Wyoming Departmental Educations
Herschler Building, 2nd Floor

2300 Capitol Avenue
Cheyenne, WY 82002-0050

1997-98

District 8 WMCC Sweetwater County

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JUN 10 1998
BUREAU OF LAND MANAGEMENT
RAWLINS FIELD OFFICE

Form Revised 6/91

Due Date July 10, 1998

Tenth above on all the report and balance with the total of the figures reported by the monthly report previously issued to school districts. Include only state and local sources revenue in the six revenue lines which is a derived. Record amount in the matter dollar.

COUNTY TREASURER'S REPORTING FORM

Line	Code	Item				Amount
AUTHORIZING ENTITY - LOCAL SCHOOL DISTRICT						
1	01111	District Property Tax (25 mills and all 20 mills non-voted) (Show property tax assessed after June 30, 1998) (W.S. 21-13-102(a)(xii)(A) or (B)(A), and W.S. 21-13-316)				
		Current	4,284,650.04	Past Delinquent	57,509.15	4,342,159.19
2	01111	District Property Tax(25 mills and all 20 mills non-voted) (Show property assessed prior to July 1, 1998) (W.S. 21-13-102(a)(xii)(A) or (B)(A), and W.S. 21-13-316).				
		Special	5,410.42	Interest	1,828.78	
		Optional 1 mill	1,282.10	Interest	349.55	
		Voted 2 mill		Interest		
		Maint. 1 mill		Interest		
		Maint. 2 mill		Interest		8,870.85
3	01112	District Property Tax(25 mills or 20 mills) paid from the county general fund pursuant to the tax deferral provisions under W.S. 39-3-105(f)				
		Current 2 mill				
4	01112	Add'l/bond board approved 2 mill supervision levy (W.S. 21-13-102(a)(xii)(A) or (B)(B))				
		Current 2 mill	1,071,195.01	Past delinquent		
		Voter 2 mill		Past delinquent opt. 1	14,386.06	1,085,581.07
5	01113	Tuition levy (2 mill non-voided diversion) (W.S.21-13-102(c)(i)(xi))				
6	01114	Tuition levy (2 mill non-voided diversion) paid from the county general fund to the tax deferral providers under W.S. 39-3-105(f)				
7	01115	Add'l. Board approved 2 mill maintenance levy (W.S. 21-13-102(a)(xii)(A) or (B)(B))				
		Current 2 mill		Past delinquent		
		Voter 2 mill		Past delinquent opt. 1		
8	01120	Motor vehicle registration fees				
		Special	247,272.45	Maint. 2 mill		
		Optional 2 mill	40,550.51			287,822.96
9	01130	Car company taxes				
		Special	11,501.90	Maint. 2 mill		
		Optional 2 mill	2,875.47			14,377.37
10	01140	Penalties and interest on delinquent taxes				
		Cur. Special	1,579.12	Delinq. Opt. 1 mill	2,323.01	
		Cur. Opt. 2 mill	474.49	Delinq. Maint. 2 mill		
		Delinq. Special	9,283.45	Delinq Voted 2 mill		
		Delinq. Maint. 1 mill		Curr Maint. 2 mill		13,660.07
11	01165	Vocational-Technical-Adult (2 ¼ mills maximum) (W.S. 21-13-102)				
12	01170	Board of Cooperative Educational Services (5 mill maximum) (W.S.21-20-109(a))				
13	01171	Board of Cooperative Educational Services(2 mill maximum) (W.S. 21-20-109(b))				
14	01192	Other (identify)				
		Vote Ex. Special	2,845.77	Bonded cont. opr 2mill	19.05	
		Vote Ex. Opt 1 mill	711.44	Bonded cont. special	139.33	
		Vote maint. 2 mill		Bonded cont. maint 2 mill		
		Proceeds fm special	14,794.76	Middle eq. Special		
		Proceeds fm opt 2 mill	2,137.14	Middle eq. Opt 1 mill		
		Proceeds fm maint. 2 mill		Middle maint. 2 mill		
		Trailer opt. 2 mill	111.62			
		Trailer special	447.48			
		Trust maint. 2 mill				21,206.79
15		TOTAL LOCAL (Sum of lines 1 thru 14)				5,773,678.30

LOCAL	CODE	ITEM				AMOUNT
16	01200	Interest earned on school district funds				
		HOME special	11,779.23	Auto fund special	4,895.41	
		HOME opt. 2 mill	3,087.74	Auto fund opt 2 mill	710.68	
		HOME opt. Maint. 2 mill		Auto fund maint. 2 mill		
		HOME 6 mill		Auto fund 6 mill		
		HOME Bond				20,473.06
		TOTAL INTEREST EARNED BY SCHOOL DISTRICT FUNDS				
AUTHORIZING ENTITY-COUNTY						
17	02110	County wide school property tax (6 mills) (Gen property assessed after June 30, 1998) (W.S. 21-13-301)				
		Current		Past delinquent		
18	02120	County wide school property tax (6mills) (Gen property assessed prior to July 1, 1998) (W.S 21-13-301)				
		Pre-delinquent		Interest		
19	02130	County wide school property tax (6 mills) paid from county general fund pursuant to the tax deferral provisions under W.S. 39-3-105(f).				
20	02135	Motor vehicle registration fees				
21	02150	Car company tax				
22	02155	Penalties and interest on delinquent taxes				
		Current		Delinquent		
23	02160	Fines and forfeitures				
24	02170	Forest reserve fees				
25	02175	Other (identify)				
		Vets exempt		Rental cars		
		Permits fees		Trailers		
		Mobile equipment				
26		TOTAL COUNTY (SUM OF LINES 17-25)				
AUTHORIZING ENTITY-STATE						
27	03110	Taylor grazing fees				
28	03120	Other (identify)				
29		TOTAL STATE (sum of lines 27-28)				
30		TOTAL OF ALL ENTITIES (sum of lines 15,16,26 and 29)				5,794,151.36

If any bonds and payments for new and outstanding bond issues should be reported on this form. Levies and payments for refunded (accounts) bond issues should not be reported.

LINE	CODE	ITEM	AMOUNT
BONDED DEBT REVENUES			
31	31200	Levy for bond redemption	590,951.00
32	31200	Levy for bond interest	122,076.74
33		Other (identify)	
34		TOTAL BONDED DEBT REVENUES (sum of lines 33 thru)	713,027.74
BONDED DEBT EXPENDITURES			
35	4000	Payments on bond principal	710,000.00
36	4000	Payments on bond interest	147,785.00
37		TOTAL BONDED DEBT EXPENDITURES	857,785.00

If levy supplement per W.S. 21-13-102, was used to known the amount and date funds were received from school districts and the amount and date them funds were paid on the debt service

DR.	CODE	ITEM	DATE	AMOUNT
38		Received from the school district		0
39		Paid against the debt service		0

21-13-311 Every date the only treasurer shall pay the principal and interest of any bonds issued under this article (21-13-301 to 21-13-321), by such school district, when the same becomes due, and all amounts so paid shall be reported a school district board of trustees at the next meeting thereafter.

All District bonds (other than bonded debt) are listed for, authorized by county but not distributed per Sec. 34, 1997

LINE	CODE	ITEM	AMOUNT
40	32000	Local revenues	30,588.28
41	32000	County revenues	
42	32000	State revenues	
43		TOTAL OF SHIPS (sum of lines 40 thru 42)	30,588.28

Date 7-10-98 Telephone (307) 875-4484

7-28

7.2.4.2 Letter 4 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS. The information you have provided regarding the economic importance of energy resources to Sweetwater County, the need for clean energy sources, and the success of multiple use of the public lands is very much appreciated and has been considered during the preparation of this EIS.

7.2.5.2 Letter 5 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments.

7.2.5.1 Letter 5 - Greg Cody, National Park Service

Greg_Cody@nps.gov (Greg Cody) on 06/11/99 06:42:26 AM

To: Clare Miller/RFO/WY/BLM/DOI@BLM
cc: WASO_ENV_Quality@nps.gov (WASO ENV Quality)
Subject: ER 99/010, Draft EIS for Continental Divide/Wamsutter II,...

We reviewed the draft Environmental Impact Statement for Continental Divide/Wamsutter II Natural Gas Project, Sweetwater and Carbon Counties, Wyoming and have no comments. This represents the consolidated comments of the National Park Service.

Greg Cody
NEPA/Section 106 Specialist
National Park Service
Intermountain Region - Denver Support Office

7.2.6.1 Letter 6 - James F. Devine, U.S. Geological Survey

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RAWLINS FIELD OFFICE

United States Department of the Interior
U.S. GEOLOGICAL SURVEY
Reno, Nevada 89503

In Reply Refer To:
Mail Stop 423

JUN - 3 1999

MEMORANDUM

To: Clare Miller, Bureau of Land Management

From: James F. Devine
Senior Advisor for Science Applications

Subject: Review of the Draft Environmental Impact Statement, Continental Divide/Wamsutter II Natural Gas Project, Sweetwater and Carbon Counties, Wyoming

The U.S. Geological Survey has reviewed the subject draft environmental impact statement (DEIS) and offers the following comments and observations:

Page vi, Executive Summary, third paragraph:

1 A succinct definition of "fracturing" would be helpful here.

Page viii, Executive Summary, second paragraph:

2 The statement, "...nor are other mineral developments anticipated due to lack of availability," needs clarification. It is unclear if "availability" refers to availability of mineral resources, to access, or some other aspect of the development.

Page 1-8, Section 1.2.4: Land Use Planning, third paragraph:

3 The reference, here and throughout the text, to "oil and gas wells" is imprecise and possibly misleading. This terminology can be construed to mean wells that produce both oil and gas. The terminology used should clearly indicate whether you are referring to oil wells or gas wells, or oil wells and gas wells, or wells producing both oil and gas.

Page 1-8, fourth paragraph:

4 "Oil and gas disturbance" like the previous item should be rephrased to be more explicit. Is the disturbance caused by oil and/or gas exploration and development?

Letter 6 - James F. Devine, U.S. Geological Survey, Page 2

Page 2-16, Section 2.6.3: Well Pad Construction:

5 | 2.6 acres for a well pad seems unusually large.

Page 2-23, Section 2.6.6: Production Facilities, last paragraph:

6 | A sentence explaining the term "christmas tree" would be helpful.

Page 3-11, Section 3.1.4.1: Mineral Resources, third paragraph:

7 | The abbreviation for units of gas and oil volumes needs to be consistent. It is confusing to mix mmcf (million cubic feet) of gas and mbo (million barrels of oil), because the measurement unit 'm' by definition means thousand. Million barrels of oil should be indicated by mmbo throughout the text.

Page 3-11, fourth paragraph:

8 | The source of production information is referenced as "(PI/Dwight's 1998)." This reference is insufficient. Clarification of the data, source of data, and a complete reference is needed. Include the full company name, whether the data are from the Petroleum Information Corporation production database, the WHCS database, or from the Dwight's production or well databases. Also, while the contract with the company may be valid for 1998, it is highly unlikely that the cumulative and other production numbers from the database are compiled through 1998. Indicate through what year(s) the cumulative and other production numbers are valid.

Page 3-14, Figure 3.2:

9 | The text on this figure is barely readable. Since the document refers to these stratigraphic intervals, the labels should be edited so that they can be easily read.

References:

Petroleum Information Corp., 1998, Well History Control System database, available from Petroleum Information Corp., 4100 Dry Creek Road, Littleton, CO 80122.
Petroleum Information Corp., 1998, petroROM Production Data on CD-ROM, available from Petroleum Information Corp., 4100 Dry Creek Road, Littleton, CO 80122.

Copy To: Director, Office of Environmental Policy and Compliance

7.2.6.2 Letter 6 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

Comment Response 1 - An explanation of fracturing appears in DEIS Section 2.6.5, page 2-23. Definitions are not provided in the Executive Summary, which is meant to be brief.

Comment Response 2 - The sentence has been modified to read, "There are currently no mineral development actions proposed for the CD/WIIPA other than oil and gas development and small-scale gravel/aggregate mining operations, nor are there likely to be any proposals to mine coal, oil shale, or locatable minerals." This is explained more fully in DEIS Section 3.1.4.1, pages 3-16 and 3-17.

Comment Response 3 - The phrase "oil and gas wells" as used in DEIS Section 1.2.4 refers to oil wells and gas wells. However, since this project primarily involves the development of natural gas resources and oil (condensate) is also produced with the gas, most wells proposed for development can be considered as producing both oil and gas.

Comment Response 4 - The term "oil and gas disturbance" generally refers to the area disturbed by oil and gas exploration and development.

Comment Response 5 - The 2.6 acres required for each well location is not unusually large. Please note that all but 0.8 acres would be reclaimed once the well is ready to produce (see DEIS Section 2.6.6 on page 2-23).

Comment Response 6 - The term "Christmas tree" is described in DEIS Section 2.6.6, page 2-23: "A series of valves designed to control pressures and regulate flows from the well (i.e., the christmas tree) would be installed at the well head."

Comment Response 7 - The abbreviation for million barrels of oil has been changed to "mmbo" throughout the text.

Comment Response 8 - The annual CD/WIIPA production figures provided in the DEIS are presented only to give the reader an idea of the magnitude of development in the area. The values are for "approximate" production, which the BLM believes is adequate for the purpose of this EIS. A more complete reference is provided in DEIS Section 6.0, on page 6-10.

Comment Response 9 - The BLM believes that Figure 3.2 is adequate for this EIS. All pertinent information regarding Figure 3.2 is provided on DEIS pages 3-11 and 3-16.

7.2.7.1 Letter 7 - Mike Wilkinson, Mike Wilkinson Trucking, Inc.

Mike Wilkinson Trucking, Inc.
281 Lester Dr
Rock Springs, WY 82901

June 9, 1999

Clare Miller
Rawlins Field Office
Bureau of Land Management
Rawlins, WY 82301-2407

re: Draft Environmental Impact Statement
Continental Divide/Wamsutter II Natural Gas Project

Dear Mr. Miller;

Thank you for the opportunity to comment of the Draft EIS for CD/WII Natural Gas Project. We are a small service company that has operated in southwest Wyoming for the past 23 years, and we have a very sincere interest in the outcome of this project.

I agree with your closing statement in your summation. The Proposed Action is compatible with management objectives and no significant impacts are anticipated.

I hope that the BLM will support industry in the development of our natural resources. If we are to survive and prosper in our communities, we must be allowed to proceed without delays in developing this countries "Fuel of Choice". The oil & gas industry keeps high-paying jobs in the state and keeps state and federal governments endowed and schools funded. The petroleum industry has been exploring for oil and gas in Wyoming for 115 years, accounting for over 21% of the total property taxes levied in Wyoming and approx. 64% of the property taxes levied on all minerals. The proposed project to drill and produce a maximum of 3,000 wells over 20 years would certainly help in insure this economic health.

Concerning environmental impacts - the operators have agreed to extensive mitigation that will alleviate negative impacts. Site specific mitigation would also be imposed on operators. I have seen that the oil & gas industry are good stewards of the land. We encourage the BLM to move forward with this DEIS with no unnecessary delays.

Sincerely,

Mike Wilkinson
Owner

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RAWLINS FIELD OFFICE

7.2.7.2 Letter 7 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

7.2.8.2 Letter 8 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

Comment Response 1 - Mitigation for actions taken in the CD/WIIPA would be those that are identified by Operators as project components, are specifically required by law, and/or are intended to prevent undue damage to surface and subsurface resources.

7.2.8.1 Letter 8 - Les White, Flying J Oil and Gas Inc.

FLYING J OIL & GAS INC.
333 WEST CENTER STREET • NORTH SALT LAKE, UTAH 84054
PHONE (801) 295-7700 • FAX (801) 298-7988

June 14, 1999

Mr. Clare Miller
Rawlins Field Office
Bureau of Land Management
P.O. Box 2407
Rawlins, WY 82301-2407

Re: Draft Environmental Impact Statement
Continental Divide/Wamsutter II Natural Gas Project
Sweetwater and Carbon Counties, Wyoming

Dear Mr. Miller:

Thank you for sending to Flying J a copy of the above-captioned EIS. We have reviewed the study and find that we support the Proposed Action alternative. We feel that such alternative is fair and equitable for all parties as proposed. We would request that any project specific and site-specific mitigation measures be realistic and not cause an undue economic burden on the operator. We strongly censor that standard procedures as currently employed by other state and regional gas field developments be used in governing the operations within said EIS boundary. 1

We look forward to the Record of Decision and issuance of drilling permits within the EIS boundary as soon as possible.

Sincerely,

Flying J Oil & Gas Inc.

Les White
Senior Landman

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RAWLINS FIELD OFFICE

BLM.TR1.Ltrs

Subsidiary • BIG WEST OIL & GAS INC.

7.2.9.1 Letter 9 - Len J. Carpenter, Wildlife Management Institute

Wildlife Management Institute

Len H. Carpenter, Field Representative
4618 Chelsea Circle • Fort Collins, Colorado 80526
Phone: (970) 223-1099 • Fax (970) 204-0189
E-Mail: address@wildlifemanagement.com
lens@frontier.com

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RAWLINS FIELD OFFICE

June 17, 1999

Clare Miller
Rawlins Field Office, BLM
P.O. Box 2407
Rawlins, WY 82301-2407

Dear Mr. Miller:

I am the Southwest Field Representative for the Wildlife Management Institute. The Institute is a private, nonprofit, scientific and educational organization founded in 1911 and dedicated to the restoration, conservation, and sound management of natural resources, especially wildlife, in North America. I have the following comments on the DEIS for the Continental Divide/Wamsutter II Natural Gas Project in Sweetwater and Carbon Counties, Wyoming.

The Institute is keenly interested in oil and gas development on public lands in Wyoming. We have participated in many previous NEPA processes dealing with this topic. As we have commented in the past, one of our concerns with this document is the absence of attention to cumulative impacts of all these projects considered together. We are familiar with the dialog on this issue rendering the conclusion by the BLM that cumulative analyses are not necessary and that the existing NEPA process is adequately protecting other valuable natural resources on public lands in Wyoming. However it seems to us that the magnitude of the proposed project (3000 additional wells) placed on the top of existing projects challenges that conclusion and begs the issue to be reconsidered. The Institute urges the Bureau to acknowledge and address our concerns on cumulative impacts and the increasing industrialization of Wyoming public lands in the FEIS. 1

The Institute is also concerned why the proposed action of the BLM (at least in magnitude and density of wells) is always the proposal put forth by the developers. We wonder why the Bureau cannot develop alternatives that would limit the magnitude of the proposed project. In this DEIS, the alternatives deal with level of surface area disturbance per section. We feel that the surface area disturbed per se is not the most important parameter to consider. We would suggest that a much more important measure is density of wells per section. The impact to wildlife and their habitats from increased industrialization is much more than simply the surface acres impacted. 2 3

Letter 9 - Len J. Carpenter, Wildlife Management Institute, Page 2

Continental Divide/Wamsutter II DEIS 2

4 We also question the outright conclusion that the No Action Alternative would not be a viable alternative. We recognize that development could proceed on other land ownerships but believe that density of wells on federal land is the real issue at hand. It may well be, that we have reached the level of development on many of these public lands in SW Wyoming that this alternative is the only viable approach. We urge the Bureau to evaluate this option in the FEIS and simply not to dismiss it as is done in the DEIS.

5 Given that the decision will be to approve this project, we suggest that the BLM should at least endorse Alternative A that imposes a 1/4-acre maximum surface disturbance per federally managed section. This alternative was developed by the BLM based on public, agency, and resource specialist concerns regarding potential impacts to sensitive resources from natural gas field developments and should be seriously considered.

6 In previous comments on these proposals, the Institute has commented on the need for effective biological monitoring during the life of the projects. In this DEIS, we notice considerable verbiage directed to this issue. However, the Institute questions the validity of the very general and basically unstructured monitoring proposed. It is our professional judgement that these efforts would only detect the most obvious outcomes (IE absence of a species) and not be of much use in "monitoring" the response of a species or a population of animals. The FEIS should articulate how these general monitoring activities will protect the resources in the long term.

7 It is stated on page 4-57 that "cumulative impacts resulting from direct habitat loss for all big game herds are unknown; however, monitoring as identified in Appendix D would allow the BLM to determine if further studies are required and whether further mitigations are necessary." The Institute feels that the preponderance of knowledge and professional opinion indicates that this project will be detrimental to big game populations and to rely on future monitoring to determine if mitigations are necessary is professionally bankrupt! Now is the time to take mitigating steps to avoid the expected impacts!

8 We recognize that monitoring efforts will take considerable fiscal resources and because of their general nature doubt they will accomplish what they are intended to do. We urge the Bureau to develop much better designed and disciplined biological monitoring protocols in specific habitats and directed to specific species to better assess these impacts. It is time that Bureau Administrators and interested publics become aware of the serious lack of human resources available to the Bureau to apply to these important resource issues. The Bureau should acknowledge these human resource deficits in the DEIS and reveal that if viable scientific monitoring is to be done, serious attention must be given to the design and conduct of such studies. This need is alluded to on page 4-56 and must be highlighted in the FEIS.

9 The detrimental impacts on water quality from this projects that is acknowledged (page 4-35) must be seriously considered. It is noticed with interest that the DEIS acknowledges in Table 3.8 that a cause of impaired stream segments within the project area is petroleum activities. The DEIS tends to dismiss these impacts. In an area where quality water is limited, further losses of

Letter 9 - Len J. Carpenter, Wildlife Management Institute, Page 3

Continental Divide/Wamsutter II DEIS 3

9 this resource must be prevented. If existing petroleum activities are impairing stream quality, what will be the impact of increased petroleum activities?

10 Now we will present some specific comments on impacts to wildlife species and their habitats. The west-wide concern for the status of sage grouse prompts us to comment on the potential impacts of this project on this important Wyoming native species. The large number of leks within the project area boundary (Map 4.7) elucidates this concern. Data on acreage of direct surface disturbance in sage grouse habitats in Table 4.12 is misleading. The Table indicates that only 2.7 % of probable nesting habitat out of 571,000 total probable nesting acres will be impacted. Knowing what we do about sage grouse nesting requirements, it is doubtful that there are 571,000 acres of viable nesting habitat in the project area. Much of the acreage is already limited to sage grouse nesting use by livestock grazing and other activities. Therefore, the 2.7 % area estimated to be impacted is grossly low. The impact to sage grouse is one topic where density of wells and associated activities associated with this project is underestated in the DEIS. We are concerned about the increased noise levels, traffic patterns, and further habitat fragmentation that will result from this project. We urge the Bureau to broaden your evaluation of the potential impacts of the project on sage grouse.

11 We are also concerned about the recognized impacts to the Red Desert Pronghorn population as a result of loss of critical winter range (page vii). The Institute disagrees with the conclusions reached that implementation of Alternatives A and B which are designed to provide protection of crucial winter habitats would result in no significant direct, indirect, or cumulative impacts. How was this conclusion reached? The Institute maintains that the proposed density of wells for this project will result in significant losses of effective habitat from direct, indirect and cumulative impacts under all alternatives. In the absence of data and justification we think it is a disservice to the readers of this document to infer otherwise. The reasoning behind the conclusions that are reached must be reevaluated in the FEIS. The Red Desert Pronghorn Herd is truly a national wildlife treasure and efforts must be taken to insure its long-term future.

12 It is highly probable that the mountain plover will be listed as threatened by the USFWS in the very near future. Very little attention or concern is given in the DEIS to this species. Given the probability of listing and the considerable amount of mountain plover habitat in the project area, we urge the Bureau to direct more attention in the FEIS to this species. In a similar manner,

13 because of the close linkage between plovers and prairie dogs, impacts on the white-tailed prairie dog should be highlighted. Map 3.11 demonstrates the wide spread distribution of prairie dogs on the project area. The proposal before USFWS for listing the black-tailed prairie dog also recommends that federal land management agencies consider impacts on all species of prairie dogs more carefully than in the recent past. The FEIS should discuss this issue.

In summary, this DEIS is like all previous NEPA documents dealing with oil and gas development on public lands in Wyoming. It appears that analyses are solely geared to substantiate a preconceived outcome. Considering the large human and fiscal costs of these NEPA processes this is indeed unfortunate. The taxpaying public and especially the nation's wildlife populations

Letter 9 - Len J. Carpenter, Wildlife Management Institute, Page 4

Continental Divide/Wamsutter II DEIS 4

deserve better. Time is running out for many of Wyoming's wildlife resources. It is time that the Bureau stand up and exercise the stewardship responsibilities that Federal Law and Policy dictate. A reevaluation of the many issues raised in this letter in the FEIS would be a start.

Sincerely,

Len H. Carpenter

cc:

R. Sparrowe, WMI
J. Baughman, Wyo G&F
A. Pierson, BLM

7.2.9.2 Letter 9 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

Comment Response 1 - Cumulative impacts for all potentially affected resources are addressed in DEIS Chapter 4.0 (see specifically DEIS pages 4-3 to 4-8). Many resources are analyzed (cumulatively) on a broad scale (see DEIS Table 4.1 and Map 4.1).

Comment Response 2 - The Proposed Action is the proposal put forth by the Operators because it is their proposed development. The BLM does not make the initial proposal for development, as it is not in the business of recovering and marketing oil and gas resources. Rather, the BLM is charged with evaluating development proposals within the legal mandates of allowing mineral recovery while affording appropriate protection to the environment. The BLM and others, during scoping, propose alternatives to the Proposed Action. Reasonable alternatives, including the No Action Alternative, receive the same consideration as the Proposed Action.

Comment Response 3 - The BLM agrees that the impacts to wildlife are more than simply the surface acres impacted, and the DEIS addresses more than direct habitat disturbance (see DEIS Section 4.2.3). Well density, indirect effects, and surface disturbance are all related impacts to wildlife and all are addressed in this EIS.

Comment Response 4 - There is no "outright conclusion that the No Action Alternative would not be a viable alternative" in the DEIS. Rather, the various legal considerations regarding the choice of this alternative are discussed in DEIS Section 2.4. The last sentence of the section plainly states that this EIS will help determine whether the proposed project meets any of the conditions that would allow selection of the No Action Alternative.

It is essential to recognize that no action does not mean that no oil and gas development activities would occur on federal lands. Briefly, the principal reasons for this include the following.

1. No action means a continuation of existing management, which includes continued recovery of oil and gas resources as authorized by the existing RMPs.
2. Private lands, which comprise more than half of the CD/WIIPA, would likely be developed regardless of the decision issued by BLM for the project, and would likely result in the drainage of federal reserves. This would require the BLM to direct the lessee to drill and produce all wells necessary to protect the leased lands from drainage pursuant to 43 C.F.R. 3100.
3. All federal lands within the CD/WIIPA have been leased for oil and gas production or are available for lease. The area is rated as suitable for gas production in the GRRA and GDRA RMPs, and accelerated development of the area has been proposed.
4. To deny all oil and gas activity on a valid lease would constitute a breach of contract of an Operator's rights to conduct development activities on the leased lands. Authority for complete denial can be granted only by Congress, which can order the leases forfeited subject to compensation. The BLM can only suspend the lease pursuant to Section 39 of the *Mineral Leasing Act* pending consultation with the Congress for a grant of authority to preclude drilling and provide compensation to the lessee.

Again, the DEIS does not preclude a decision to choose the No Action Alternative; rather, it provides information to determine whether such a decision would be the best decision. Every resource is evaluated under the No Action Alternative, as well as under the Proposed Action and other action alternatives.

Comment Response 5 - The BLM will consider your comment during preparation of the ROD for this project.

Comment Response 6 - The BLM believes that the Wildlife Protection Plan, as presented in DEIS Appendix D, is adequate to monitor the wildlife species of greatest concern, and the species most likely to be affected by the proposed project. Area wildlife monitoring would be augmented from current efforts if the project is authorized, and much of the cost would be paid for by Operators. Furthermore, in the event that substantive adverse effects are noted during monitoring, the BLM in consultation with other agencies (e.g., WGFD, USFWS) may modify mitigation/protection measures.

Comment Response 7 - There is no conclusive evidence that oil and gas development has had significant impacts to big game herds; however, the DEIS indicates that significant indirect impacts could occur to big game herds even with the implementation of standard mitigation measures (see DEIS Section 4.2.3.1). Rather, big game numbers are regulated primarily by natural forces, especially the weather, and by harvest quotas set by the WGFD. The WGFD currently monitors the big game herds in the state and identifies factors that may be limiting. Pronghorn numbers, for instance, vary considerably from year to year and can usually be linked to climatic conditions or management decisions. Standard mitigations for big game would be implemented regardless of monitoring findings; however, additional mitigations may be developed and implemented based on monitoring results.

Comment Response 8 - See Comment Response 6, above. The BLM acknowledges that a considerable increase in the level of effort would be required for implementation of the Wildlife Protection Plan; however, if the project is authorized, the BLM would be committed to plan implementation. Furthermore, because of the anticipated need for additional financial resources, a Cooperative Agreement among participants (e.g., Operators, BLM, USFWS) is being prepared.

Comment Response 9 - The potential impacts of the project on water quality are considered in DEIS Section 4.1.7. All impacts are considered and mitigations would be implemented.

Comment Response 10 - The determination that the CD/WIIPA contains 576,300 acres (as modified in this FEIS) of probable sage grouse nesting habitat in the Red Desert UGBMA is based on the best information available to the BLM and WGFD. If you have other contradictory data, we would appreciate receiving a copy of it. The DEIS does discuss the impacts of noise on sage grouse (see DEIS Section 4.2.3.2, page 4-59); however, precise determinations on the number of grouse that would be impacted, or the resultant impacts on sage grouse populations, are difficult to estimate accurately because such relationships are poorly understood. The BLM will require reasonable mitigation measures believed to provide adequate protection to sage grouse populations. In addition, the EIS has been modified such that probable sage grouse nesting habitats are now considered as SRAs.

Comment Response 11 - The BLM is under no obligation to prove that the proposed project would not impact the Red Desert pronghorn population; rather, we are obligated to take an objective look at the likely impacts to pronghorn, based in part on the impacts to the species from similar projects in Wyoming. There is no evidence that oil and gas projects have had significant impacts on herd units, and the BLM believes that the proposed project would not jeopardize the herd's long-term survival.

Comment Response 12 - Impacts to, and mitigation for, mountain plover are adequately discussed in Section 4.2.5 and D-2.3.2.3 of the EIS.

Comment Response 13 - The DEIS states that, "In general, all prairie dog colonies on the CD/WIIPA would be avoided, where practical." No black-tailed prairie dog colonies occur on the CD/WIIPA.

7.2.10.1 Letter 10 - Moe Morrow

(2)

June 18, 1999

Clare Miller
Rawlins Office
BLM
Rawlins, WY 82301-2407

Re: Draft Environmental Impact Statement
Continental Divide Wamsutter II
Natural Gas Project
Sweetwater and Carbon Counties, WY

Mr Miller,

I would like to thank You for the opportunity to comment on the Draft E.I.S. for the Continental Divide, Wamsutter II Natural Gas Project. As a small business owner, I have a very strong connection with oil & gas companies here in Sweetwater County.

By reading your study, we are looking once a 20 year period, a total approximate 3000 wells of a constant level of time. This is a great impact on the future financial and tax base for our county.

Letter 10 - Moe Morrow, Page 2

(2)

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JUN 21 1999
BUREAU OF LAND MANAGEMENT
RAWLINS, WYOMING

After visiting with many local companies we all have a great deal in common. Multiple use of the lands, environmental impacts of the lands, and keeping our employees employed. So they will have the income to pay their mortgage, raise their families, and provide a tax base for Sweetwater County.

With all companies concerned, they are more than willing to have a respect for the lands environment in a safe and respectful way. The environmental issues compared to the economic impact are outweigh environmental concerns.

I have enclosed a list of 30 companies that pay just over 82.38 88% of our taxes in Sweetwater County, that gives us a total of 87840527464 These figures were provided to me by the Sweetwater County Assessors Office.

Simply with these figures available, it is clear to me how imperative we all work together to move forward

Letter 10 - Moe Morrow, Page 3

(3)

with this project.

I do thank You for the opportunity to express my concerns on this proposed E.I.S. The future of our County will be impacted on the decisions of today.

Moe Morrow
P.O. Box 1823
Rock Springs, WY 82901
307-382-4230

Letter 10 - Moe Morrow, Attachment 1

SWEETWATER COUNTY TOP 30 TAXPAYERS - TAX YEAR 1998

COMPANY	TAXES PAID	% OF TOTAL
1. Amoco Production or Pipeline	$ 7,870,085.52	9.9113%
2. PPC	$ 7,408,291.40	9.3616%
3. UP Resources	$ 5,786,692.62	7.2875%
4. Solvay Minerals	$ 3,527,343.00	4.8201%
5. General Chemical Corporation	$ 4,424,494.30	5.5723%
6. OCI	$ 4,422,765.50	5.5498%
7. Bridger Coal	$ 4,406,798.28	5.5323%
8. Pacificorp	$ 3,914,582.64	4.9299%
9. TG Soda Ash, Inc.	$ 2,959,344.52	3.7269%
10. Westpro	$ 2,241,903.52	2.8234%
11. Texaco	$ 1,724,009.80	2.4230%
12. Cabot Oil & Gas Production	$ 1,858,713.28	2.3409%
13. Black Buttes Coal	$ 1,794,274.66	2.2596%
14. TRI Exploration	$ 1,276,246.20	1.6073%
15. Idaho Power	$ 1,138,765.00	1.4341%
16. Calpine Energy Company	$ 823,033.08	1.0332%
17. UP Railroad	$ 769,760.80	0.9696%
18. Marathon Oil	$ 739,582.64	0.9316%
19. Questar Pipeline	$ 696,351.28	0.8770%
20. UMC Petroleum	$ 609,317.12	0.7675%
21. CIG	$ 520,470.48	0.6552%
22. HS Resources	$ 521,621.82	0.6547%
23. Snyder Oil	$ 490,466.40	0.6179%
24. Church at Dwight	$ 464,309.22	0.5847%
25. FP Phosphates	$ 457,470.48	0.5761%
26. Abraxas Petroleum	$ 452,221.34	0.5624%
27. Mountain Gas Resources	$ 444,231.36	0.5624%
28. Exxon	$ 424,006.54	0.5340%
29. Nuac Oil	$ 368,412.00	0.4640%
30. Williams Gas Processing	$ 365,550.66	0.4604%
TOTAL	$ 65,416,893.36	82.3828%
TOTAL TAXES PAID IN SWEETWATER COUNTY	$ 79,405,274.66	100.0000%

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RAWLINS, WYOMING

7.2.10.2 Letter 10 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS. The information you have provided regarding the economic importance of energy resources to Sweetwater County, the need for clean energy sources, and the success of multiple use of the public lands are very much appreciated and have been considered during preparation of this EIS.

Letter 11 - Dennis Brabec, President, People for the USA, State of Wyoming, Page 2

not just Sweetwater and Carbon Counties, as well as to the State of Wyoming in general and the Federal government.

Once again, Wyoming People for the USA appreciates the opportunity to comment the proposed EIS. The oil and gas industry has proven extraction of mineral resources is accomplished in an environmentally sound manner for the good of Wyoming, its residents and its wildlife. We encourage the BLM to move forward with this project without unnecessary delay for the economic health of the State.

Respectfully,

Dennis Brabec
President
Wyoming People for the USA

7.2.11.1 Letter 11 - Dennis Brabec, President, People for the USA, State of Wyoming

Dennis J. Brabec, President
People for the USA
State of Wyoming
P.O. Box 41
Big Piney, Wyoming 83113
Home (307) 276-3514 Work (307) 276-3331

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JUN 23 1999
BUREAU OF LAND MANAGEMENT
RAWLINS FIELD OFFICE

June 22, 1999

Clare Miller
Rawlins Field Office
Bureau of Land Management
Rawlins, WY 82301-2407

RE: DRAFT ENVIRONMENTAL IMPACT STATEMENT
CONTINENTAL DIVIDE/WAMSUTTER II NATURAL GAS PROJECT
SWEETWATER AND CARBON COUNTIES, WY

Dear Mr. Miller,

Wyoming People for the USA would like to thank you for the opportunity to comment on the draft Environmental Impact Statement for the Continental Divide/Wamsutter II Natural Gas Project. As the representative for numerous multiple use advocacy groups in Wyoming, we have a strong interest in the outcome of the management of any public lands in Wyoming.

The proposed project to drill and produce a maximum of 3,000 wells over 20 years is keeping with the overall multiple use aspects of the area. As this area is within the checkerboard of Federal, Private and State Land, oil and gas development of the area will continue regardless of Federal approval. It is, therefore, in the best interest of the Federal lands within this area to be analyzed and approved for drilling under the Proposed Action.

The Operators have agreed to extensive mitigation measures which are ample to alleviate any negative environmental impacts. In addition, site specific mitigation measures would also be imposed on the Operators.

While environmental issues are extremely important, the economic aspects of the proposed project are of significant importance to the Area and Wyoming. The work that would be generated by the drilling of these wells is critical to the health of numerous oil and gas service related companies. These companies are important to the economics well-being of communities on which they reside.

Due to tax structure and the distribution of federal royalties and taxes in Wyoming, federal revenues play a key role in the survival of the counties, schools and other governmental agencies in the state. The economic benefit of the proposed drilling should be changed to reflect those benefits are applicable to all communities in the state,

7.2.11.2 Letter 11 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

7.2.12.1 Letter 12 - T.D. Latham, Willies Dirt Service, Inc.

Willies Dirt Service, Inc.
PO Box 71
Wamsutter, Wy. 82336
307-324-7412

June 20, 1999

Clare Miller
Rawlins Field Office
Bureau of Land Management
PO Box 2407
Rawlins, Wy. 82301

Re:Draft Environmental Impact Statement
Continental Divide/Wamsutter II Natural Gas Project
Sweetwater and Carbon Counties, WY

Dear Mr. Miller,

We of Willies Dirt Service, Inc. would like to thank you for the opportunity to comment on the Draft Environmental Impact Statement for the Continental Divide/Wamsutter II Natural Gas Project. As a member of the Southwest Wyoming Mineral Association, we have a strong interest in the outcome of the management of any public land in Wyoming.

The proposed project to drill and produce a maximum of3,000 wells over 20 years is in keeping with the overall multiple use aspects of the area. As this area is with in the checkerboard of Federal, Private and State land, oil and gas development of the area will continue regardless of Federal approval. It is, therefore, in the best interest of the Federal lands within this area to be analyzed and approved for drilling under the Proposed Action.

The Operators have agreed to extensive mitigation measures, which are ample to alleviate any negative environmental impacts. In addition, site specific mitigation measures would also be imposed on the Operators.

While environmental issues are extremely important, the economic aspects of the proposed project far outweigh the environmental concerns. The work that would be generated by the drilling of these wells is critical to the health of numerous oil and gas service related companies. These companies are important to the economic well being of the communities in which they reside.

Due to the tax structure and the distribution of federal royalties and taxes in Wyoming, federal revenues play a key role in the survival of the counties, schools and other

7.2.12.2 Letter 12 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

Letter 12 - T.D. Latham, Willies Dirt Service, Inc., Page 2

governmental agencies the state. The economic benefit of the proposed drilling should be changed to reflect that those benefits are applicable to all communities in the state, not just Sweetwater and Carbon Counties, as well as to the State of Wyoming in general and the Federal government.

Once again, we appreciate the opportunity to comment on the proposed EIS. It is our belief that the oil and gas industry has proven that extraction of mineral resources can be, and is, accomplished in an environmentally sound manner for the good of Wyoming, its resident and its wildlife. We encourage the BLM to move forward with this project without unnecessary delay for the economic health of the State.

Respectfully,

T.D. Latham
Willies Dirt Service, Inc.

7.2.13.1 Letter 13 - Jay R. Anderson, Schmid Oilfield Services, Inc.

SCHMID OILFIELD SERVICES, INC.
LaBarge (307)386-2605 Rock Springs (307) 382-7618 Evanston (307) 789-0225

June 22, 1999

Mr. Clare Miller
Rawlins Field Office
Bureau of Land Management
Rawlins, Wy 82301-2407

Draft Environmental Impact Statement
Continental Divide/Wamsutter II Natural
Gas Project – Sweetwater and Carbon
Counties, Wyoming

Dear Mr. Miller:

I would like to express my support for the subject project. This represents an important project for central Wyoming and one that has many positive benefits associated with it.

My understanding is that the proposed project encompasses the possibility of drilling and producing 3,000 wells over a 20 year time period. Reliable government approval to drill on federal lands associated with this development is critical to business success of that magnitude. Substantial economic gain to the state of Wyoming can and will accrue from the development involved. Solid paying jobs, with long term economic stability to the communities and families directly involved, are obvious project benefits. Equally beneficial is the boost this type of project provides to the service support industries. Expanding the tax base and increasing tax payments for the schooling of our children is another added benefit that can not be overlooked—particularly given the current financial condition the state of Wyoming is in.

We are a certified service support company. We have seen first hand the extensive efforts that Operators undertake to preserve the environment while pursuing oil and gas developments. We are convinced that petroleum development can occur without harming neither the environment nor the wildlife.

I encourage the BLM to move forward with approval for this project as expeditiously as is possible. I believe that this is a good deal for the local communities, the state of Wyoming and the federal agencies stewarding this type of activity.

Respectfully,

Jay R. Anderson
CFO

P.O. Box 37
LaBarge, Wyo. 83123
P.O. Box 2331
Rock Springs, Wyo. 82901
P.O. Box 815
Evanston, Wyo. 82930

7.2.13.2 Letter 13 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

7.2.14.2 Letter 14 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

7.2.14.1 Letter 14 - Lyle E. Woelich

Lyle E. Woelich
1110 Kanbasky
Green River, WY 82935

June 22, 1999

Mr. Clare Miller
Bureau of Land Management
P.O. Box 2407
Rawlins, WY 82301-2407

Re: Draft Environmental Impact Statement
Continental Divide/Wamsutter II Natural Gas Project

Dear Mr. Miller,

I would like to thank you for the opportunity to comment on the Draft Environmental Impact Statement for the Continental Divide/Wamsutter Natural gas project. As you are aware this is a very important issue that demands careful consideration. As other issues continue to surface, it must be remembered that needs of the many must outweigh the needs of the few. The proposed project has suffered scrutiny from various groups attempting to sway the outcome in their favor. While their motives are honorable, they have a very narrow focus that does not favor all concerns.

This project is very important not only to the people of southwest Wyoming, but also to the nation in general, keeping with the administrations declared "fuel of choice". The petroleum industry has successfully drilled and completed many gas wells in the Wamsutter and surrounding area with minimal environmental impact. Stringent mitigation measures are already in place to alleviate any negative impacts to the environment or wildlife.

I encourage the Bureau to move forward with approving the project for full field development without further delay.

Respectfully Submitted,

Lyle E. Woelich

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JUN 23 1999
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RAWLINS FIELD OFFICE

7.2.15.1 Letter 15 - Sally Pedersen, Rocky Mountain Casing Crews, Inc.

ROCKY MOUNTAIN
CASING CREWS INC.
P.O. Box 3029 Rock Springs, WY 82902
(307) 362-7050 Fax (307) 362-1899

RECEIVED
JUN 23 1999
BUREAU OF LAND MANAGEMENT
RAWLINS FIELD OFFICE

June 22, 1999

Clare Miller
Rawlins Field Office
Bureau of Land Management
Rawlins, WY 82301-2407

RE: DRAFT ENVIRONMENTAL IMPACT STATEMENT
CONTINENTAL DIVIDE/WAMSUTTER II NATURAL GAS PROJECT

Mr. Miller,

We at Rocky Mountain Casing Crews, Inc. are urging the Bureau of Land Management to approve the Continental Divide/Wamsutter II Natural Gas Project.

In reviewing the draft EIS and attending the meetings we feel that all appropriate measures have been taken. It is obvious that air quality, wildlife and land use issues have been thoroughly reviewed and all parties could and will benefit from this project.

We greatly appreciate your time and consideration in this extremely important issue that not only effects the Bureau of Land Management but also the many companies in the surrounding counties, the project is also beneficial to the towns, county and state tax bases that is detrimental to our educational quality where the majority of the taxes are used.

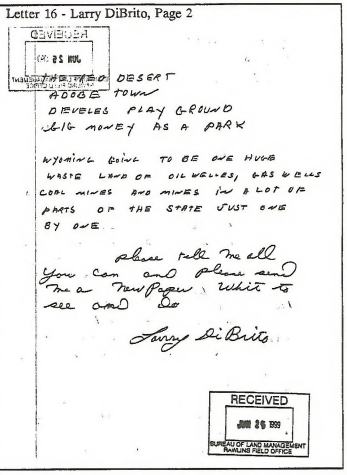
Sincerely,
ROCKY MOUNTAIN CASING CREWS, INC.

SALLY PEDERSEN

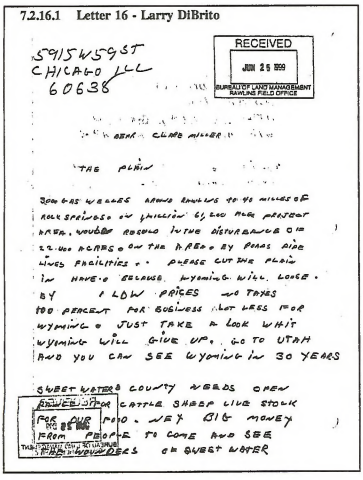
7.2.15.2 Letter 15 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

Letter 16 - Larry DiBrito, Page 2



7.2.16.1 Letter 16 - Larry DiBrito



7.2.16.2 Letter 16 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS. Please also refer to FEIS Section 7.2.2.2, Comment Response 1.

7.2.17.1 Letter 17 - Larry DiBrito

5915 W 59 ST
CHICAGO, ILL
60638

RECEIVED
JUN 28 1999
BUREAU OF LAND MANAGEMENT
RAWLINS FIELD OFFICE

DEAR SIR

3000 GAS WELLS, OIL WELLS, COAL MINES
IT IS TO HAVE. THIS MUST BE
OUT IN HAVE.
WYOMING IT IS LOOSING BIG MONEY.
BECAUSE OIL, GAS, COAL MINING
BUSINESS ARE PAYING THE SAME
AS THEY DID 10 Years

Wyoming Wombats will be no
more. IF this come to Pass

1 SAND DUNES 6 BEAR'S TUSK
2 SAGE GOAT MTS 6 CRATER MTS
3 WHITE MTS 7 RED DESERT FLAT
4 RED DESERT BASIN 8 GREAT DIBIDE

the red Desert

ROCK TOWN
DEVILES PLAY GROUND

Letter 17 - Larry DiBrito, Page 2

DENVER CO
28 JUN
1999

Please do not turn they into
of Wyoming it to oil Gas Wells
and Coal Mines

Please save some of Wyoming
Wombats.

Dear sir please make more
grazing land, dig more wat
land forest land and
Desert land

Please write back and
tell me all you can
please send me a Newspaper
any thing you can

Larry Di Brito

7.2.17.2 Letter 17 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS. Please also refer to FEIS Section 7.2.2.2, Comment Response 1.

7.2.18.1 Letter 18 - T.N. Tipton, Marathon Oil Company

T. N. (Tim) Tipton
Production Manager
Rocky Mountain Region

Marathon Oil Company

1501 Stampede Avenue
Cody, WY 82414-4721
Telephone 307/587-4961

June 23, 1999

Clare Miller
Rawlins Field Office
Bureau of Land Management
P. O. Box 2407
Rawlins, Wyoming 82301-2407

RECEIVED
JUN 28 1999
BUREAU OF LAND MANAGEMENT
RAWLINS FIELD OFFICE

Re: Continental Divide / Wamsutter II Draft EIS
COMMENTS

Dear Mr. Miller:

Marathon Oil Company would like to thank you for the opportunity to comment on the Continental Divide / Wamsutter II Draft Environmental Impact Statement. Upon review of the Document, it is apparent that the items brought forth during the Scoping Phase, along with additional concerns have been addressed.

Marathon Oil Company is "IN SUPPORT" of the Proposed Action of Full Development as represented in the Draft Document. Upon review of the Impacts by Environmental Resource, Marathon submits the following comments:

1. AIR QUALITY

A. Increase in Criteria and Hazardous Air Pollutant Emissions – Marathon is in agreement of the Insignificant Determination for the Proposed Action as long as compliance with State and National Ambient Air Quality Standards are maintained. The Mitigation Measures of obtaining all applicable air pollutant emission permits, limiting compressor Nox emissions, and controlling fugitive dust during construction with suppressants when needed, can be performed by Industry.
B. Air Quality Related Values "just-noticeable change" Threshold – Marathon is in agreement of the Insignificant Determination for the Proposed Action.
C. Air Quality Related Values - visibility impacts USFS - Marathon is in agreement of the Insignificant Determination for the Proposed Action.
D. Air Quality Related Values – atmospheric deposition (acid rain) - Marathon is in agreement of the Insignificant Determination for the Proposed Action.

The Air Quality Modeling that was performed by the Air Quality Impact Assessment Team represented the utmost of technological elements in its methods of fact gathering and final determinations. The issuance of Draft EIS was postponed for numerous months awaiting the Modeling results. Hopefully, the waiting period associated with the Modeling Analysis will

Letter 18 - T.N. Tipton, Marathon Oil Company, Page 2

Clare Miller
Bureau of Land Management
June 23, 1999
Page 2

prove beneficial in avoiding future delays, since the reported findings appear to be accurate and true.

2. TOPOGRAPHY / PHYSIOGRAPHY

A. Cuts and Fills at Well Locations and Along Roads - Marathon is in agreement of the Insignificant Determination for the Proposed Action. The Mitigation Measures of avoiding prominent features and areas of high economic potential and adhering to the Transportation Planning Guidelines can be met by Industry.
B. Alteration of Surface Drainages - Marathon is in agreement of the Insignificant Determination for the Proposed Action. The Mitigation Measures of avoiding drainages where possible, re-establishment, reclamation, and monitoring of impacted drainages, designing of roads and appropriate culverts, and the acquisition of necessary Section 404 Permits can be met by Industry.

3. MINERALS / GAS AND OIL

A. Depletion of Gas and Condensate Reserves - Marathon is in agreement of the Significant Determination for the Proposed Action. The main thrust of this NEPA Procedure is to develop a document that can be followed in order to extract the gas and condensate to its non-economic level of extraction, without waste. If the No Action Alternative is followed, Significant economic impacts will result. These will include: violation of lease agreements, loss of Federal Royalties, and loss of monies to the State and Local Governments.
B. Depletion of Aggregate Sources for Road and Facility Site Surfacing - Marathon is in agreement of the Insignificant Determination for the Proposed Action because additional sources would be identified.
C. Localized Temporary Loss of Access to Other Mineral Resources - Marathon is in agreement of the Insignificant Determination for the Proposed Action. Gas extraction is and would become more pervasive. The Mitigation Measure of avoiding future mine / quarry sites, if known in advance, could be followed by industry where practical.

4. GEOLOGIC HAZARDS

A. Flood Damage to Pipelines and Facilities - Marathon is in agreement of the Insignificant Determination for the Proposed Action. In addition to the Mitigation Measures of avoidance of floodplains and flood-prone areas, where possible, if drainages have to be crossed, they will be crossed at the perpendicular.
B. Reactivation of Stabilized Dunes Due to Ground Cover Removal, Inadequate Reclamation – Marathon is in Disagreement of the Proposed Action finding of Significant. If the Mitigation Measures of "Avoidance of dunes where possible; appropriate and timely reclamation, erosion control, and revegetation; adherence to

1

Letter 18 - T.N. Tipton, Marathon Oil Company, Page 3

Clare Miller
Bureau of Land Management
June 23, 1999
Page 3

1 project- and site-specific reclamation guidelines; reclamation success monitoring" are followed, then the Significant finding should be changed to Insignificant.
C. Earthquake Damage to Pipelines and Facilities - Marathon is in agreement of the insignificant Determination for the Proposed Action. As stated, this is due to the low potential for earthquakes. It should be pointed out that during the past 25 years of gas producing activities in the area of concern, No equipment damage has occurred due to earthquakes.
D. Land Slides and Slumping at Construction Sites - Marathon is in agreement of the Insignificant Determination for the Proposed Action. The Mitigation Measures of "avoidance of unstable areas where possible, appropriate and timely reclamation and erosion control" can be followed by industry.
E. Mobilization of Radioactive Materials - Marathon is in agreement of the Insignificant Determination for the Proposed Action. The Mitigation Measures of "appropriate containment, disposal, and monitoring of drill cuttings" can be followed by industry.

5. PALEONTOLOGICAL RESOURCES

A. Disturbance / Destruction of Important Fossils - Marathon is in agreement of the Insignificant Determination for the Proposed Action.
B. Loss of Important Fossil Materials Due to Private Collection or Vandalism - Marathon is in agreement of the Insignificant Determination for the Proposed Action.

The Mitigation Measures, addressing the two above items, "avoidance, recovery, and/or monitoring as determined during the preconstruction BLM paleontological surveys" can be followed by industry.

C. Discovery of Previously Unknown Fossils – Marathon is in agreement of the Beneficial Determination for the Proposed Action.

6. SOILS

A. Disturbance and Erodional Loss of Soils During Vegetation Stripping, Topsoil Salvaging and Stockpiling, and Cut-and-Fill Operations - Marathon is in agreement of the Insignificant Determination for the Proposed Action.
B. Soil Compaction and Decreased Productivity – Marathon is in agreement of the Insignificant Determination for the Proposed Action.

The Mitigation Measures, addressing the two above items, specifying avoidance of erosion prone areas and utilizing erosional control techniques can be followed by industry.

C. Contamination Due to Accidental Hazardous Material Spills - Marathon is in agreement of the Insignificant Determination for the Proposed Action. The Mitigation Measure of

Letter 18 - T.N. Tipton, Marathon Oil Company, Page 4

Clare Miller
Bureau of Land Management
June 23, 1999
Page 4

"adherence to spill prevention and control countermeasure plans, and other applicable local, state, and Federal rules and regulations" can be followed by industry.
D. Reactivation of Stabilized Sand Dunes Due to Ground Cover Removal and Inadequate Reclamation - Marathon is in Disagreement of the Proposed Action finding of Significant. If the Mitigation Measures of "adherence to reclamation guidelines and prompt revegetation to re-establish sand dunes" is followed, along with avoidance, the Proposed Action should prove Insignificant.
E. Mobilization of Potentially Toxic elements - Marathon is in agreement of the Insignificant Determination for the Proposed Action. The Mitigation Measure of "application of erosion control, soil stabilization, and reclamation measures" can be followed by industry.

2

7. SURFACE WATER RESOURCES

A. Increased Turbidity, Salinity, and Sedimentation of Surface Waters Due to Runoff From Disturbed Areas - Marathon is in agreement of the Insignificant Determination for the Proposed Action. Mitigation Measures addressing the use of appropriate erosion and sedimentation control techniques can be followed by industry. Also, where more than five acres are disturbed, Storm Water Discharges Permits will be required.
B. Loss of Proper Functioning Condition; Decreased Conditions in Functioning At-Risk Drainages - Marathon is in agreement of the Significant Determination for the Proposed Action when Antelope/Bitter Creek is discussed. Here avoidance could change this Determination to Insignificant.
C. Contamination of Surface Waters From Accidental Hazardous Material Spills - Marathon is in agreement of the Insignificant Determination for the Proposed Action. The Mitigation Measure of following the SPCC Plans can be adhered to by industry.
D. Surface Water Depletion - Marathon is in agreement of the Insignificant Determination for the Proposed Action.
E. Contamination of Surface Waters From Discharge of Unsuitable Quality Produced Water - Marathon is in agreement of the Insignificant Determination for the Proposed Action. The Mitigation Measure of "appropriate disposal of poor quality produced water; adherence to NPDES permit requirements" can be followed by industry.

8. GROUND WATER RESOURCES

A. Contamination of Ground Water From Discharge of Produced Water, Accidental Hazardous Material Spills, and/or Cross Aquifer Mixing Through Well Bores - Marathon is in agreement of the Insignificant Determination for the Proposed Action. The Mitigation Measures of "appropriate containment of materials; adherence to SPCC plans and adherence to drilling and casing requirements can be followed by industry.
B. Reduced Ground Water Availability From Withdrawal of Drilling Water - Marathon is in agreement of the Insignificant Determination for the Proposed Action. Recharging of

Letter 18 - T.N. Tipton, Marathon Oil Company, Page 5

Clare Miller
Bureau of Land Management
June 23, 1999
Page 5

the aquifers would take place once drilling is completed.

9. NOISE

A. Increased Noise Levels Near Residences and Within Crucial Wildlife Habitats During Crucial Periods - Marathon is in agreement of the Generally Insignificant Determination for the Proposed Action. The Mitigation Measures of avoidance of residences and no drilling or construction activities within crucial wildlife habitat during crucial periods along with equipment muffler use and education of employees can be followed by industry.

10. ODOR

A. Presence of Offensive Odors Associated with Drilling and Production Operations and Proximal to Facilities and Roads - Marathon is in agreement of the Insignificant Determination for the Proposed Action. The Mitigation Measures of regular equipment maintenance and avoidance of residential areas where practical can be followed by industry.

11. VEGETATION

A. Removal of Vegetation - Marathon is in agreement of the Insignificant Determination for the Proposed Action. The Mitigation Measures addressing reclamation can be followed by industry.
B. Changes in Vegetation Diversity Following Reclamation and Potential Weed Infestation - Marathon is in agreement of the Insignificant Determination for the Proposed Action. The Mitigation Measures of weed control and revegetative procedures can be followed by industry.
C. Disturbance of Wetlands and Riparian Areas - Marathon is in agreement of the Insignificant Determination for the Proposed Action. The Mitigation Measures of avoidance and obtaining Section 404 Permits can be followed by industry.
D. Reclamation Unsuccessful After Five Years - Disturbance of Wetlands and Riparian Areas - Marathon is in agreement of the Insignificant Determination for the Proposed Action. The Mitigation Measures of adherence to project- and site-specific reclamation along with monitoring of success can be followed by industry.
E. Reactivation of Dunal Areas Due to Removal of Vegetation - Marathon is in Disagreement of the Proposed Action finding of Significant. If the Mitigation Measures of "adherence to site-specific reclamation success and monitoring guidelines" are followed, along with avoidance, the Proposed Action should prove Insignificant.

3

12. WILDLIFE

Letter 18 - T.N. Tipton, Marathon Oil Company, Page 6

Clare Miller
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June 23, 1999
Page 6

A. Loss of Big Game Crucial Habitat - Marathon is in agreement of the Insignificant Determination for the Proposed Action. The Mitigation Measures of minimizing project activities in these areas along with avoidance during crucial winter range time periods can be followed by industry.

B. Loss of Sage Grouse Productivity - Marathon is in agreement of the Insignificant Determination for the Proposed Action. The Mitigation Measures of "Minimize project activities in breeding and nesting areas; appropriate reclamation with shrub species; and employee education" can be followed by industry.

4 C. Loss of Raptor Productivity - Marathon is in Disagreement of the Significant Determination for the Proposed Action. If the Mitigation Measures of avoidance of nesting areas during crucial periods and the use of artificial nesting structures as appropriate, are followed, then the Determination should be Insignificant.

5 D. Indirect Disturbance - Marathon is in Disagreement of the Significant Determination for the Proposed Action. If the Mitigation Measures of avoidance of construction and other activities within crucial habitats during crucial periods are followed, then the Determination should be Insignificant.

E. Increased Wildlife Mortality From Activities of Man - Marathon is in agreement of the Insignificant Determination for the Proposed Action. The Mitigation Measures addressing road design, containment and disposal of hazardous materials, pit security, and adherence to the Transportation Planning Guidelines can be followed by industry.

F. Overall Wildlife Habitat Degradation - Marathon is in agreement of the Insignificant Determination for the Proposed Action. The Mitigation Measures addressing erosion control, timely reclamation, reclamation monitoring, containment, disposal of hazardous material, and avoidance of crucial areas during crucial time periods can be followed by industry.

13. WILD HORSES

A. Wild Horse Displacement or Mortality Due to Habitat Loss or Other Activities of Man; Loss of Forage - Marathon is in agreement of the Insignificant Determination for the Proposed Action. The Mitigation Measures of timely revegetation, and adherence to reclamation and transportation planning guidelines can be followed by industry.

14. TREATENED, ENDANGERED, AND SENSITIVE SPECIES

A. Mortality or Disturbance of any Listed or Candidate T&E Species or Disturbance of Crucial Habitat for Listed and Candidate Species - Marathon is in agreement of the Insignificant / No Adverse Effects Determination for the Proposed Action. The Mitigation Measures to minimize habitat disturbances, avoiding prairie dog colonies, conducting Black-footed Ferret surveys as necessary, compliance with USFWS protection measures, and timely reclamation of disturbed areas can be followed by industry.

Letter 18 - T.N. Tipton, Marathon Oil Company, Page 7

Clare Miller
Bureau of Land Management
June 23, 1999
Page 7

B. Reduction in Other Sensitive Species and/or Species of Concern Due to Mortality or Habitat Removal - Marathon is in agreement of the Insignificant Determination for the Proposed Action. The Mitigation Measures of conducting Preconstruction surveys and avoidance of habitats of potential occurrence where possible can be followed by industry.

15. CULTURAL RESOURCES

A. Disturbance / Destruction of Important Sites - Marathon is in agreement of the Insignificant Determination for the Proposed Action. The Mitigation Measures as stated are presently being utilized as everyday work practices by industry.

B. Loss of Important Cultural Materials Due to Private Collection or Vandalism – Marathon is in agreement of the Insignificant Determination for the Proposed Action. The Mitigation Measure of imposing disciplinary action for vandalism and illegal collection is currently being utilized under present laws addressing cultural material.

C. Disturbance of Important Native American Religious or Culturally Significant Sites- Marathon is in agreement of the Insignificant Determination for the Proposed Action. If sites are encountered, the Mitigation Measure addressing Consultation and coordination with the Native American Tribes can be followed by industry. Presently, this measure is being utilized in normal operating procedures.

16. SOCIOECONOMICS

A. Increase in Population - Marathon is in agreement of the Insignificant Determination for the Proposed Action. It is anticipated that local personnel will be hired for the jobs that are created during the Life of the Project.

B. Increase in Demand for Temporary Housing - Marathon is in agreement of the Insignificant Determination for the Proposed Action due to the numerous vacancies that presently exist as shown by the numerous For Sale Signs on Rawlins' homes.

C. Increase for Demand for Local Government Facilities or Services - Marathon is in agreement of the Insignificant Determination for the Proposed Action. With the increase of revenues generated for the local government, facilities and services can be expanded to meet the needs as they occur.

6 D. Disruption or Change of Character of Communities - Marathon is in Disagreement of the Significant Determination of the Proposed Action. If the Mitigation Measures addressing the proximity of facilities to residential areas of concern are followed, the Determination should be Insignificant.

E. Increase in Tax Revenue and Royalties and Stimulation of Local Economy – Marathon is in agreement of the Significant Determination for the Proposed Action. The revenues generated will be a great benefit to the communities.

F. Increase of Traffic and Degradation of Roads – Marathon is in agreement of the Insignificant Determination of the Proposed Action. The Mitigation Measure of utilizing the Transportation Plan can be followed by industry.

Letter 18 - T.N. Tipton, Marathon Oil Company, Page 8

Clare Miller
Bureau of Land Management
June 23, 1999
Page 8

17. LAND USE

A. Reduction of AUMs for Livestock, Wild Horses, and Wildlife - Marathon is in agreement of the Insignificant Determination of the Proposed Action.The Mitigation Measures addressing timely reclamation and coordination with ranching operators can be followed by industry.

B. Road Failure / Traffic - Marathon is in agreement of the Insignificant Determination of the Proposed Action. The Mitigation Measures of constructing and maintaining roads to BLM standards can be followed by industry.

7 C. Displacement of Rural Residents - Marathon is in Disagreement of the Significant Determination of the Proposed Action. If the Mitigation Measures addressing the proximity of facilities to residential areas of concern are followed, the Determination should be Insignificant.

D. Changes in Character and Recreational Uses of the Area Due to Construction, Presence of Facilities, Noise, Dust, Odor, and Increased Human Activities - Marathon is in agreement of the Insignificant Determination of the Proposed Action. The Mitigation Measures addressing the use of equipment mufflers; minimizing disturbance areas, appropriate and timely reclamation, and employee education can be followed by industry.

E. Infringement on Prior Rights - Marathon is in agreement of the Insignificant Determination of the Proposed Action. The Mitigation Measures addressing cooperation of existing Rights-of-Way owners, coordinating construction efforts, and restriction of development in proximity to residential areas can be followed by industry.

18. VISUAL RESOURCES

A. Modification in the Basic Elements of Visual Resources by Presence of Facilities and Equipment - Marathon is in agreement of the Significant Determination of the Proposed Action. However, by Allowing the Mitigation Measures of painting facilities with Standard Environmental Colors to blend with the surroundings and timely reclamation, the presence of facilities will have less of an impact.

19. HAZARDOUS MATERIAL

A. Soil, Surface Water, and Ground Water Contamination and Wildlife Exposure – Marathon is in agreement of the Insignificant Determination of the Proposed Action. The Mitigation Measures addressing SPCC Plans, the netting and fencing of pits, the monitoring, containment, and proper disposal of potentially hazardous materials can be followed by industry.

Letter 18 - T.N. Tipton, Marathon Oil Company, Page 9

Clare Miller
Bureau of Land Management
June 23, 1999
Page 9

The issuance of the Final Environmental Impact Statement authorizing the Proposed Action of Full Development is essential to the State of Wyoming, the Federal Government, the Local Communities, and Industry. The development of the gas reserves in this area has been placed on hold for years while this EIS has been compiled. It is imperative that the Final EIS and Record of Decision be issued in a timely manner so that some gas development can take place this year. If this does not occur, wildlife timing stipulations will be upon us and some areas will be off-limits for development until the summer of 2000.

Sincerely,

MARATHON OIL COMPANY

T. N. (Tim) Tipton
Production Manager
Rocky Mountain Region

7.2.18.2 Letter 18 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

Comment Response 1 - The BLM agrees that suggested mitigation measures would likely avoid the reactivation of stabilized dunes due to ground cover removal; however, we do believe that such reactivation is possible under certain adverse conditions and, therefore, have taken the conservative view that under such conditions significant impacts could occur. The BLM would ensure that the project is implemented in such a way as to avoid most if not all significant impacts, and we are confident that the Operators would do the same.

Comment Response 2 - Please refer to Comment Response 1, above.

Comment Response 3 - Please refer to Comment Response 1, above.

Comment Response 4 - The BLM agrees that if all mitigations suggested in the DEIS are successful there likely would be no significant impacts; however, biological systems sometimes behave in unanticipated ways, and we believe that significant impacts to raptors could occur even with the mitigation practices in place. The BLM and Operators would take all reasonable measures to minimize the potential for significant impacts. Furthermore, the Wildlife Protection Plan for this project (see DEIS Appendix D) would help in identifying/evaluating whether unanticipated impacts are occurring.

Comment Response 5 - The BLM agrees that if all mitigations suggested in the DEIS are successful there likely would be no significant impacts; however, biological systems sometimes behave in unanticipated ways, and we believe that significant indirect impacts to big game could occur even with implementation of suggested mitigation practices. The BLM and Operators would take all reasonable measures to minimize the potential for significant impacts. Furthermore, the Wildlife Protection Plan for this project (see DEIS Appendix D) would help in identifying/evaluating whether unanticipated impacts are occurring.

Comment Response 6 - The BLM agrees that with the implementation of mitigations, it is unlikely that the proposed project would have significant impacts on the character of most rural residential areas; however, based on scoping and DEIS comments, it is likely that some area users and residents would perceive the development of oil and gas resources in areas of the CD/WIIPA as significant.

Comment Response 7 - Please refer to Comment Response 6, above.

7.2.19.1 Letter 19 - Art Zeiger, Carbon County Commissioner

Art Zeiger, Chairman
Gary Gustafson
Linda Fleming

P.O. BOX 6
RAWLINS, WY. 82301
1-307-328-2671

Commissioners of Carbon County
Rawlins, Wyoming 82301

RECEIVED
JUN 29 1999
BUREAU OF LAND MANAGEMENT
RAWLINS FIELD OFFICE

June 22, 1999

Mr. Clare Miller
Rawlins Field Office
Bureau of Land Management
P.O. Box 2407
Rawlins, Wyoming 82301-2407

RE: Continental Divide/Wamsutter II Natural Gas Project DEIS (DES 99-10)

Dear Mr. Miller:

After review of the Draft Environmental Impact Statement for the Continental Divide/Wamsutter II Natural Gas Project, Carbon County supports the concept of the proposed action as outlined in the document. As stated in the DEIS, Carbon County is highly dependant upon natural resource industries for both employment opportunities and tax revenue generation that allows the County to provide the needed services required by our residents. Approval of the proposed project would allow an important sector of our local economy to continue to thrive and grow while protecting our environmental assets that are so valuable to our residents.

Carbon County's policies, as cited in the DEIS through the Carbon County Land Use Plan, are to foster new gas development while protecting the natural resources of South Central Wyoming. The proposed action would facilitate expansion of the gas industry while incorporating the needed mitigation required to preserve the county's landscape for future uses. Therefore, the Commission supports approval of Alternative B as delineated within the document to provide a balance between resource protection and development. The County Commissioners are opposed to the adoption of the No Action Alternative listed within the document because it would achieve neither of the County's stated objectives. Additionally, adoption of the No action Alternative would violate both your agency's objectives and pre-existing contractual arrangements between leaseholders and the federal government. Carbon County does not view the No Action Alternative as a viable option.

Carbon County would like to see three other issues addressed or amended in the Final EIS: noxious weed control, final conditions of proposed operational roadways and the

Letter 19 - Art Zeiger, Carbon County Commissioner, Page 2

requirement of gas operators to pursue legal action on behalf of the federal government against private landowners for legal access for data collection (Table E-4.1).

1 Agriculture is a major component of our local economy. Many agricultural operators are dependent upon federal lands within the CD/WIIPA for grazing livestock. During and after the LOP grazing operations will continue within the project area. To ensure the viability of these operations the County believes elements should be included within the FEIS addressing the suppression of noxious weeds. Not only could the project, if not properly mitigated, possibly assist the invasion by these plants into the project area, but once established these plants may spread to private land. Invasive plant species pose a significant risk to agriculture and the native environment of Wyoming. We hope the BLM and operators would take the appropriate steps to prevent their establishment as a result of the proposal.

2 The County agrees with the concept of reclaiming the project roads upon its completion. However, once the public gains familiarity with the project roads it will continue to access these roads after reclamation. The public use of the reclaimed roads without continued maintenance will create erosion potential. To prevent significant erosion in an area highly prone to erosion the roads should be graveled, left in place and maintained after completion of the project.

3 Page E-14 of the Biological assessment lists requirements for inventory and monitoring of species of special concern. Though Carbon County supports the protection of these species, the requirements placed on the operator in the Assessment should be altered. Table E-4.1 requires the operators to take necessary legal action to gain access to private lands for federal agents to conduct data collection. The County believes this requirement might create contention between local landowners and operators. The federal government, not the operators, should be required to take any necessary action to secure access to these lands for its activities.

As stated above, the Commissioners of Carbon County support the proposed project and its alternatives as outlined in the Continental Divide/Wamsutter II Draft Environmental Impact Statement. We look forward to reviewing the FEIS for this project and appreciate the opportunity to submit these comments for your consideration.

Sincerely,

Art Zeiger
Chairman

7.2.19.2 Letter 19 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

Comment Response 1 - Mitigation measures for noxious weed control are presented in DEIS Section 2.6.13.8, Item #5, page 2-33, and in Section 4.2.1.5, pages 4-43 and 4-44.

Comment Response 2 - Roads that are not required for some legitimate purpose at the end of the project would be reclaimed. Roads that would serve a legitimate purpose would be left in place assuming appropriate agreements for maintenance are negotiated. A methodology is in place for identifying the road reclamation process, and this process involves consideration of multiple agency and user concerns. Please refer to DEIS Appendix B, Transportation Plan, Section B-4.0.

Comment Response 3 - The requirements presented in DEIS Table E-4.1 were developed not only to protect TEC&SC, but also Operators, private landowners, and agencies from violations of the *Endangered Species Act*. Please be advised that the *Endangered Species Act* is applicable to both public and private lands. Furthermore, a procedure is in place for TEC&SC protection where access is not granted by private landowners (see DEIS Table E-4.1).

Letter 20 - Taylor and Juanita Myers, Page 2

And the Federal Government We encourage the BLM to move forward with this Project without unnecessary delay for the economic health of the U.S. State.

Thank You
Taylor & Juanita Myers

7.2.20.1 Letter 20 - Taylor and Juanita Myers

RECEIVED
JUN 29 1999
BUREAU OF LAND MANAGEMENT
RAWLINS FIELD OFFICE

[illegible]
Rock Springs Wyo
82901-2203

June 28 1999

Dear Miller
Rawlins Field Office
We Would Like to thank You for opportunity to Comment on the Draft Environmental Impact Statement for the Continental Divide/Wamsutter II Natural Gas Project.
The proposed project to be drill and Produce a maximum of 3000 Well over a 20 year is in keeping with the overall multiple use aspects of the Area.
While environmental issues are extremely important, the economic aspects the proposed project for Surface Water and Carbon Content as well as to the State of Wyoming in General

7.2.20.2 Letter 20 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

7.2.21.1 Letter 21 - David R. Dalton

June 29, 1999

Mr. Clare Miller
Rawlins Field Office
Bureau of Land Management
P. O. Box 2407
Rawlins, Wyoming 82301-2407

Re: Continental Divide / Wamsutter II Draft EIS
COMMENTS

Dear Mr. Miller:

As a concerned citizen and resident of the State of Wyoming, I would like to thank you for this opportunity to comment on the Continental Divide / Wamsutter II Draft Environmental Impact Statement.

The Draft Document addresses many Impacts and it appears that the majority of the Impacts will be "Insignificant" under the Proposed Action of Full Development. One impact that will not be Insignificant is the Socioeconomic Impact to the State of Wyoming through the increase of Tax Revenues and Royalties that this Development will generate for the State. Because of oil and gas development with in this State, sales taxes have been non-existent and property taxes have been held to a minimum. Our Schools have also reaped the benefit from royalties paid to the State.

I am in agreement of the "Proposed Action" of Full Development as presented in the Draft Document. For the sake of all our children please see that the "Final EIS and Record of Decision" be issued in a timely manner so that gas development can continue in this area without further delay.

Sincerely,

David R. Dalton
218 Hayden Ave
Evanston, Wy. 82930

7.2.22.1 Letter 22 - David Weber

June 29, 1999

Mr. Clare Miller
Rawlins Field Office
Bureau of Land Management
P. O. Box 2407
Rawlins, Wyoming 82301-2407

Re: Continental Divide / Wamsutter II Draft EIS
COMMENTS

Dear Mr. Miller:

As a concerned citizen and resident of the State of Wyoming, I would like to thank you for this opportunity to comment on the Continental Divide / Wamsutter II Draft Environmental Impact Statement.

The Draft Document addresses many Impacts and it appears that the majority of the Impacts will be "Insignificant" under the Proposed Action of Full Development. One impact that will not be Insignificant is the Socioeconomic Impact to the State of Wyoming through the increase of Tax Revenues and Royalties that this Development will generate for the State. Because of oil and gas development with in this State, sales taxes have been non-existent and property taxes have been held to a minimum. Our Schools have also reaped the benefit from royalties paid to the State.

I am in agreement of the "Proposed Action" of Full Development as presented in the Draft Document. For the sake of all our children please see that the "Final EIS and Record of Decision" be issued in a timely manner so that gas development can continue in this area without further delay.

Sincerely,

David Weber
609 Garner Ave
Evanston, WY 82930

7.2.21.2 Letter 21 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

7.2.22.2 Letter 22 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

7.2.23.1 Letter 23 - David Dennis

June 29, 1999

Mr. Clare Miller
Rawlins Field Office
Bureau of Land Management
P. O. Box 2407
Rawlins, Wyoming 82301-2407

Re: Continental Divide / Wamsutter II Draft EIS
COMMENTS

Dear Mr. Miller:

As a concerned citizen and resident of the State of Wyoming, I would like to thank you for this opportunity to comment on the Continental Divide / Wamsutter II Draft Environmental Impact Statement.

The Draft Document addresses many impacts and it appears that the majority of the impacts will be "Insignificant" under the Proposed Action of Full Development. One impact that will not be Insignificant is the Socioeconomic Impact to the State of Wyoming through the increase of Tax Revenues and Royalties that this Development will generate for the State. Because of oil and gas development with in this State, sales taxes have been non-existent and property tax es have been held to a minimum. Our Schools have also reaped the benefit from royalties paid to the State.

I am in agreement of the "Proposed Action" of Full Development as presented in the Draft Document. For the sake of all our children please see that the "Final EIS and Record of Decision" be issued in a timely manner so that gas development can continue in this area without further delay.

Sincerely, David Dennis 28 6245 Valley Evanston Wy 82930

7.2.24.1 Letter 24 - Larry and LaVeta Pennock

RECEIVED
JUN 29 1999
BUREAU OF LAND MANAGEMENT
RAWLINS FIELD OFFICE

Clare Miller, Team Leader
BLM Rawlins Field Office
P.O. Box 2407
Rawlins, WY. 82301-2407

Re: DEIS
Continental Divide/Wamsutter II Natural Gas Project
Sweetwater and Carbon Counties, Wyoming

Dear Mr. Miller,

After our long dry spell in the gas and oil field this past winter and spring, this project is what might save some of our jobs and small businesses in these two counties.

We can only hope that the BLM will let this project go foward without the usual unnecessary delays.

We both work in the oil field and we know when its good, it good and when its bad, its bad. This project would help out a lot of small service companies and individuals for a long time.

Thank you for giving us the change to let you know our feeling on this project.

Larry LaVeta Pennock

Larry and LaVeta Pennock
156 Lester Drive
Rock Springs, WY. 82901

7.2.23.2 Letter 23 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

7.2.24.2 Letter 24 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

7.2.25.1 Letter 25 - Richard Ducharme, Wire Technology, Inc.

June 29, 1999

Mr. Clare Miller
Rawlins Field Office
Bureau of Land Management
P. O. Box 2407
Rawlins, Wyoming 82301-2407

Re: Continental Divide / Wamsutter II Draft EIS
COMMENTS

Dear Mr. Miller:

As a concerned citizen and resident of the State of Wyoming, I wou ld like to thank you for this opportunity to comment on the Contin ental Divide / Wamsutter II Draft Environmental Impact Statement.

The Draft Document addresses many Impacts and it appears that the majority of the Impacts will be "Insignificant" under the Proposed Action of Full Development. One impact that will not be Insignifi cant is the Socioeconomic Impact to the State of Wyoming through t he increase of Tax Revenues and Royalties that this Development wi ll generate for the State. Because of oil and gas development with in this State, sales taxes have been non-existent and property tax es have been held to a minimum. Our Schools have also reaped the b enefit from royalties paid to the State.

I am in agreement of the "Proposed Action" of Full Development as presented in the Draft Document. For the sake of all our children please see that the "Final EIS and Record of Decision" be issued i n a timely manner so that gas development can continue in this are a without further delay.

Sincerely,

WIRE ⊕ TECH
WIRELINE TECHNOLOGY INC.

Richard Ducharme
84 Declaration Dr.
Evanston, WY. 82930
(307) 783-0542

Page 1

7.2.26.1 Letter 26 - Scott A. Pilch

June 28, 1999

Mr. Clare Miller
Rawlins Field Office
Bureau of Land Management
P. O. Box 2407
Rawlins, Wyoming 82301-2407

Re: Continental Divide / Wamsutter II Draft EIS
COMMENTS

Dear Mr. Miller:

As a concerned citizen and resident of the State of Wyoming, I wou ld like to thank you for this opportunity to comment on the Contin ental Divide / Wamsutter II Draft Environmental Impact Statement.

The Draft Document addresses many Impacts and it appears that the majority of the Impacts will be "Insignificant" under the Proposed Action of Full Development. One impact that will not be Insignifi cant is the Socioeconomic Impact to the State of Wyoming through t he increase of Tax Revenues and Royalties that this Development wi ll generate for the State. Because of oil and gas development with in this State, sales taxes have been non-existent and property tax es have been held to a minimum. Our Schools have also reaped the b enefit from royalties paid to the State.

I am in agreement of the "Proposed Action" of Full Development as presented in the Draft Document. For the sake of all our children please see that the "Final EIS and Record of Decision" be issued i n a timely manner so that gas development can continue in this are a without further delay.

Sincerely,

Scott A. Pilch
607 Main Street
Evanston WY 82930

7.2.25.2 Letter 25 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

7.2.26.2 Letter 26 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

7.2.27.1 Letter 27 - Paul D. ? (signature illegible)

June 28, 1999

Mr. Clare Miller
Rawlins Field Office
Bureau of Land Management
P. O. Box 2407
Rawlins, Wyoming 82301-2407

Re: Continental Divide / Wamsutter II Draft EIS
COMMENTS

Dear Mr. Miller:

As a concerned citizen and resident of the State of Wyoming, I would like to thank you for this opportunity to comment on the Continental Divide / Wamsutter II Draft Environmental Impact Statement.

The Draft Document addresses many Impacts and it appears that the majority of the Impacts will be "Insignificant" under the Proposed Action of Full Development. Wildlife issues appear to be thoroughly investigated and the Mitigation Measures that will need to be adhered to can be dealt with by the oil and gas operators.

I am in agreement of the "Proposed Action" of Full Development as presented in the Draft Document. The Final EIS and Record of Decision should be issued in a timely manner so that gas development can continue in this area without further delay.

Sincerely,

7.2.28.1 Letter 28 - William D. Shade

June 28, 1999

Mr. Clare Miller
Rawlins Field Office
Bureau of Land Management
P. O. Box 2407
Rawlins, Wyoming 82301-2407

Re: Continental Divide / Wamsutter II Draft EIS
COMMENTS

Dear Mr. Miller:

As a concerned citizen and resident of the State of Wyoming, I would like to thank you for this opportunity to comment on the Continental Divide / Wamsutter II Draft Environmental Impact Statement.

- The Draft Document addresses many Impacts and it appears that the majority of the Impacts will be "Insignificant" under the Proposed Action of Full Development. One impact that will not be Insignificant is the Socioeconomic Impact to the State of Wyoming through the increase of Tax Revenues and Royalties that this Development will generate for the State. Because of oil and gas development within this State, sales taxes have been non-existent and property taxes have been held to a minimum. Our Schools have also reaped the benefit from royalties paid to the State.

I am in agreement of the "Proposed Action" of Full Development as presented in the Draft Document. The Final EIS and Record of Decision should be issued in a timely manner so that gas development can continue in this area without further delay.

Sincerely,

William D Shade

7.2.27.2 Letter 27 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

7.2.28.2 Letter 28 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

7.2.29.1 Letter 29 - Wes R. Handley

June 28, 1999

Mr. Clare Miller
Rawlins Field Office
Bureau of Land Management
P. O. Box 2407
Rawlins, Wyoming 82301-2407

Re: Continental Divide / Wamsutter II Draft EIS
COMMENTS

Dear Mr. Miller:

As a concerned citizen and resident of the State of Wyoming, I would like to thank you for this opportunity to comment on the Continental Divide / Wamsutter II Draft Environmental Impact Statement.

- The Draft Document addresses many impacts and it appears that the majority of the Impacts will be "Insignificant" under the Proposed Action of Full Development. Wildlife issues appear to be thoroughly investigated and the Mitigation Measures that will need to be adhered to can be dealt with by the oil and gas operators. Wildlife coexists with the area gas development extremely well.
- Another impact that will not be Insignificant is the Socioeconomic Impact to the State of Wyoming through the increase of Tax Revenues and Royalties that this Development will generate for the State. Because of oil and gas development within this State, sales taxes have been non-existent and property taxes have been held to a minimum. Our Schools have also reaped the benefit from royalties paid to the State.
- We must also remember the income generated to the Federal Government from gas development. Many companies entered into a contract with the Federal Government to lease and drill on these lands. It appears, that any delays, borders on breach of contract.

I am in agreement of the "Proposed Action" of Full Development as presented in the Draft Document. The Final EIS and Record of Decision should be issued in a timely manner so that gas development can continue in this area without further delay.

Sincerely,

Wes R. Handley

7.2.30.1 Letter 30 - Frank Krugh

June 28, 1999

Mr. Clare Miller
Rawlins Field Office
Bureau of Land Management
P. O. Box 2407
Rawlins, Wyoming 82301-2407

Re: Continental Divide / Wamsutter II Draft EIS
COMMENTS

Dear Mr. Miller:

As a concerned citizen and resident of the State of Wyoming, I would like to thank you for this opportunity to comment on the Continental Divide / Wamsutter II Draft Environmental Impact Statement.

The Draft Document addresses many Impacts and it appears that the majority of the Impacts will be "Insignificant" under the Proposed Action of Full Development. Air Quality seems to be a major issue and the extended time that was taken to prepare the Air Quality Model and analyze its findings should prove supportive for the Proposed Action.

I am in agreement of the "Proposed Action" of Full Development as presented in the Draft Document. The Final EIS and Record of Decision should be issued in a timely manner so that gas development can continue in this area without further delay.

Sincerely,

Frank Krugh

7.2.29.2 Letter 29 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

7.2.30.2 Letter 30 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

7.2.31.1 Letter 31 - Carol M. Rosencranse

June 28, 1999

Mr. Clare Miller
Rawlins Field Office
Bureau of Land Management
P. O. Box 2407
Rawlins, Wyoming 82301-2407

Re: Continental Divide / Wamsutter II Draft EIS
COMMENTS

Dear Mr. Miller:

As a concerned citizen and resident of the State of Wyoming, I would like to thank you for this opportunity to comment on the Continental Divide / Wamsutter II Draft Environmental Impact Statement.

- The Draft Document addresses many Impacts and it appears that the majority of the Impacts will be "Insignificant" under the Proposed Action of Full Development. One impact that will not be Insignificant is the Socioeconomic Impact to the State of Wyoming through the increase of Tax Revenues and Royalties that this Development will generate for the State. Because of oil and gas development within this State, sales taxes have been non-existent and property taxes have been held to a minimum. Our Schools have also reaped the benefit from royalties paid to the State.

I am in agreement of the "Proposed Action" of Full Development as presented in the Draft Document. The Final EIS and Record of Decision should be issued in a timely manner so that gas development can continue in this area without further delay.

Sincerely,

Carol M. Rosencranse

7.2.32.1 Letter 32 - John K. Woods

June 28, 1999

Mr. Clare Miller
Rawlins Field Office
Bureau of Land Management
P. O. Box 2407
Rawlins, Wyoming 82301-2407

Re: Continental Divide / Wamsutter II Draft EIS
COMMENTS

Dear Mr. Miller:

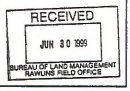
As a concerned citizen and resident of the State of Wyoming, I would like to thank you for this opportunity to comment on the Continental Divide / Wamsutter II Draft Environmental Impact Statement.

- The Draft Document addresses many Impacts and it appears that the majority of the Impacts will be "Insignificant" under the Proposed Action of Full Development. One impact that will not be Insignificant is the Socioeconomic Impact to the State of Wyoming through the increase of Tax Revenues and Royalties that this Development will generate for the State. Because of oil and gas development within this State, sales taxes have been non-existent and property taxes have been held to a minimum. Our Schools have also reaped the benefit from royalties paid to the State.

I am in agreement of the "Proposed Action" of Full Development as presented in the Draft Document. The Final EIS and Record of Decision should be issued in a timely manner so that gas development can continue in this area without further delay.

Sincerely,

John K. Woods



7.2.31.2 Letter 31 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

7.2.32.2 Letter 32 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

7.2.33.1 Letter 33 - Nathan Leonard

Mr. Clare Miller
Rawlins Field Office
Bureau of Land Management
P. O. Box 2407
Rawlins, Wyoming 82301-2407

Re: Continental Divide / Wamsutter II Draft EIS
COMMENTS

Dear Mr. Miller:

As a concerned citizen and resident of the State of Wyoming, I would like to thank you for this opportunity to comment on the Continental Divide / Wamsutter II Draft Environmental Impact Statement.

The Draft Document addresses many Impacts and it appears that the majority of the Impacts will be "Insignificant" under the Proposed Action of Full Development. Air Quality seems to be a major issue and the extended time that was taken to prepare the Air Quality Model and analyze its findings should prove supportive for the Proposed Action.

I am in agreement of the "Proposed Action" of Full Development as presented in the Draft Document. The Final EIS and Record of Decision should be issued in a timely manner so that gas development can continue in this area without further delay.

Sincerely,

Nathan Leonard

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JUN 30 1999
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RAWLINS FIELD OFFICE

7.2.34.1 Letter 34 - Jeff Briggs

June 28, 1999

Mr. Clare Miller
Rawlins Field Office
Bureau of Land Management
P. O. Box 2407
Rawlins, Wyoming 82301-2407

Re: Continental Divide / Wamsutter II Draft EIS
COMMENTS

Dear Mr. Miller:

As a concerned citizen and resident of the State of Wyoming, I would like to thank you for this opportunity to comment on the Continental Divide / Wamsutter II Draft Environmental Impact Statement.

The Draft Document addresses many Impacts and it appears that the majority of the Impacts will be "Insignificant" under the Proposed Action of Full Development. Wildlife issues appear to be thoroughly investigated and the Mitigation Measures that will need to be adhered to can be dealt with by the oil and gas operators.

I am in agreement of the "Proposed Action" of Full Development as presented in the Draft Document. The Final EIS and Record of Decision should be issued in a timely manner so that gas development can continue in this area without further delay.

Sincerely,

Jeff Briggs

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BUREAU OF LAND MANAGEMENT
RAWLINS FIELD OFFICE

7.2.33.2 Letter 33 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

7.2.34.2 Letter 34 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

7.2.35.1 Letter 35 - Gerry Pence

June 28, 1999

Mr. Clare Miller
Rawlins Field Office
Bureau of Land Management
P. O. Box 2407
Rawlins, Wyoming 82301-2407

Re: Continental Divide / Wamsutter II Draft EIS
COMMENTS

Dear Mr. Miller:

As a concerned citizen and resident of the State of Wyoming, I would like to thank you for this opportunity to comment on the Continental Divide / Wamsutter II Draft Environmental Impact Statement.

The Draft Document addresses many Impacts and it appears that the majority of the Impacts will be "Insignificant" under the Proposed Action of Full Development. One impact that will not be Insignificant is the Socioeconomic Impact to the State of Wyoming through the increase of Tax Revenues and Royalties that this Development will generate for the State. Because of oil and gas development within this State, sales taxes have been non-existent and property taxes have been held to a minimum. Our Schools have also reaped the benefit from royalties paid to the State.

I am in agreement of the "Proposed Actioc" of Full Development as presented in the Draft Document. The Final EIS and Record of Decision should be issued in a timely manner so that gas development can continue in this area without further delay.

Sincerely,

Gerry Pence

7.2.36.1 Letter 36 - Clifford C. Main

June 28, 1999

Mr. Clare Miller
Rawlins Field Office
Bureau of Land Management
P. O. Box 2407
Rawlins, Wyoming 82301-2407

Re: Continental Divide / Wamsutter II Draft EIS
COMMENTS

Dear Mr. Miller:

As a concerned citizen and resident of the State of Wyoming, I would like to thank you for this opportunity to commeot on the Contineotal Divide / Wamsutter II Draft Environmental Impact Statement.

- The Draft Document addresses many Impacts and it appears that the majority of the Impacts will be "Insignificant" under the Proposed Action of Full Development. One impact that will not be Insignificant is the Socioeconomic Impact to the State of Wyoming through the increase of Tax Revenues and Royalties that this Development will geoerate for the State. Because of oil and gas development within this State, sales taxes have been non-existent and property taxes have been held to a minimum. Our Schools have also reaped the benefit from royalties paid to the State.

I am in agreement of the "Proposed Actioc" of Full Development as presented in the Draft Document. The Final EIS and Record of Decision should be issued in a timely manner so that gas development can continue in this area without further delay.

Sincerely,

Clifford C. Main

7.2.35.2 Letter 35 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

7.2.36.2 Letter 36 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

7.2.37.1 Letter 37 - Chris Frost

June 29, 1999

Mr. Clare Miller
Rawlins Field Office
Bureau of Land Management
P. O. Box 2407
Rawlins, Wyoming 82301-2407

Re: Continental Divide / Wamsutter II Draft EIS
COMMENTS

Dear Mr. Miller:

As a concerned citizen and resident of the State of Wyoming, I would like to thank you for this opportunity to comment on the Continental Divide / Wamsutter II Draft Environmental Impact Statement.

The Draft Document addresses many Impacts and it appears that the majority of the Impacts will be "Insignificant" under the Proposed Action of Full Development. One impact that will not be Insignificant is the Socioeconomic Impact to the State of Wyoming through the increase of Tax Revenues and Royalties that this Development will generate for the State. Because of oil and gas development within this State, sales taxes have been non-existent and property taxes have been held to a minimum. Our Schools have also reaped the benefit from royalties paid to the State.

I am in agreement of the "Proposed Action" of Full Development as presented in the Draft Document. For the sake of all our children please see that the "Final EIS and Record of Decision" be issued in a timely manner so that gas development can continue in this area without further delay.

Sincerely,

Chris Frost
322 Gateway Blvd. #71
Rock Springs, Wy.
82901

7.2.38.1 Letter 38 - Eric Wenzel

June 29, 1999

Mr. Clare Miller
Rawlins Field Office
Bureau of Land Management
P. O. Box 2407
Rawlins, Wyoming 82301-2407

Re: Continental Divide / Wamsutter II Draft EIS
COMMENTS

Dear Mr. Miller:

As a concerned citizen and resident of the State of Wyoming, I would like to thank you for this opportunity to comment on the Continental Divide / Wamsutter II Draft Environmental Impact Statement.

The Draft Document addresses many Impacts and it appears that the majority of the Impacts will be "Insignificant" under the Proposed Action of Full Development. One impact that will not be Insignificant is the Socioeconomic Impact to the State of Wyoming through the increase of Tax Revenues and Royalties that this Development will generate for the State. Because of oil and gas development within this State, sales taxes have been non-existent and property taxes have been held to a minimum. Our Schools have also reaped the benefit from royalties paid to the State.

I am in agreement of the "Proposed Action" of Full Development as presented in the Draft Document. For the sake of all our children please see that the "Final EIS and Record of Decision" be issued in a timely manner so that gas development can continue in this area without further delay.

Sincerely,

Eric Wenzel
50 Reliance Rd. #4
Reliance, Wy.
82901

7.2.37.2 Letter 37 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

7.2.38.2 Letter 38 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

7.2.39.1 Letter 39 - Brad Franks

June 29, 1999

Mr. Clare Miller
Rawlins Field Office
Bureau of Land Management
P. O. Box 2407
Rawlins, Wyoming 82301-2407

Re: Cootinental Divide / Wamsutter II Draft EIS
COMMENTS

Dear Mr. Miller:

As a concerned citizno and resident of the Stnte of Wyoming, I would like to thank you for this opportunity to comment on the Cootinsotal Divide / Wamsutter II Draft Environmeotal Impact Statement.

The Draft Document addresses many Impacts and it appears that the majority of the Impacts will be "Insignificant" under the Proposed Action of Full Development. Ooe impact that will oot be Insignificant is the Socioecooomic Impact to the State of Wyomiog through the increase of Tax Revenues and Royalties that this Development will geoerate for the State. Because of oil and gas development withio this State, sales taxes have been ooo-existent and property taxes have beeo beld to a minimum. Our Schools have also reaped the benefit from royalties paid to the State.

I am in agreement of the "Proposed Actioo" of Full Development as presented in the Draft Document. For the sake of all our children please see that the "Final EIS and Record of Decisioo" be issued in a timely manoer so that gas development can continue io this area without further delay.

Sincerely,

Brad Franks
5020 Springs Dr. #21
Rock Springs, Wy.
82901

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JUN 30 1999
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RAWLINS FIELD OFFICE

7.2.40.1 Letter 40 - Alan L. Ennis

June 29, 1999

Mr. Clare Miller
Rawlins Field Office
Bureau of Land Management
P. O. Box 2407
Rawlins, Wyoming 82301-2407

Re: Continental Divide / Wamsutter II Draft EIS
COMMENTS

Dear Mr. Miller:

As a concerned citizen and resideot of the State of Wyoming, I would like to thank you for this opportunity to comment on the Continental Divide / Wamsutter II Draft Environmental Impact Statement.

The Draft Document addresses many Impacts and it appears that the majority of the Impacts will be "Insignificant" under the Proposed Action of Full Development. Ooe impact that will oot be Insignificant is the Socioeconomic Impact to the State of Wyoming through the increas of Tax Revenues and Royalties that this Development will generate for the State. Because of oil and gas development within this State, sales taxes have been non-existent and property taxes have been beld to a minimum. Our Schools have also reaped the benefit from royalties paid to the State.

I am io agreement of the "Proposed Action" of Full Development as presented in the Draft Document. For the sake of all our children please see that the "Final EIS and Record of Decisioo" be issued in a timely manner so that gas development can continue in this area without further delay.

Sincerely,

Alan L Ennis
363 Turret
Rock Springs, WY
82901

RECEIVED
JUN 30 1999
BUREAU OF LAND MANAGEMENT
RAWLINS FIELD OFFICE

7.2.39.2 Letter 39 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

7.2.40.2 Letter 40 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

7.2.41.1 Letter 41 - Kendra Kalivas

June 29, 1999

Mr. Clare Miller
Rawlins Field Office
Bureau of Land Management
P. O. Box 2407
Rawlins, Wyoming 82301-2407

Re: Continental Divide / Wamsutter II Draft EIS
COMMENTS

Dear Mr. Miller:

As a concerned citizen and resident of the State of Wyoming, I would like to thank you for this opportunity to comment on the Continental Divide / Wamsutter II Draft Environmental Impact Statement.

The Draft Document addresses many Impacts and it appears that the majority of the Impacts will be "Insignificant" under the Proposed Action of Full Development. One impact that will not be Insignificant is the Socioeconomic Impact to the State of Wyoming through the increase of Tax Revenues and Royalties that this Development will generate for the State. Because of oil and gas development within this State, sales taxes have been non-existent and property taxes have been held to a minimum. Our Schools have also reaped the benefit from royalties paid to the State.

I am in agreement of the "Proposed Action" of Full Development as presented in the Draft Document. For the sake of all our children please see that the "Final EIS and Record of Decision" be issued in a timely manner so that gas development can continue in this area without further delay.

Sincerely,

Kendra Kalivas
289 Apache Lane
Rock Springs, Wy.
82901

RECEIVED
JUN 30 1999
BUREAU OF LAND MANAGEMENT
RAWLINS FIELD OFFICE

7.2.42.1 Letter 42 - Paul Kalivas

June 29, 1999

Mr. Clare Miller
Rawlins Field Office
Bureau of Land Management
P. O. Box 2407
Rawlins, Wyoming 82301-2407

Re: Continental Divide / Wamsutter II Draft EIS
COMMENTS

Dear Mr. Miller:

As a concerned citizen and resident of the State of Wyoming, I would like to thank you for this opportunity to comment on the Continental Divide / Wamsutter II Draft Environmental Impact Statement.

The Draft Document addresses many Impacts and it appears that the majority of the Impacts will be "Insignificant" under the Proposed Action of Full Development. One impact that will not be Insignificant is the Socioeconomic Impact to the State of Wyoming through the increase of Tax Revenues and Royalties that this Development will generate for the State. Because of oil and gas development within this State, sales taxes have been non-existent and property taxes have been held to a minimum. Our Schools have also reaped the benefit from royalties paid to the State.

I am in agreement of the "Proposed Action" of Full Development as presented in the Draft Document. For the sake of all our children please see that the "Final EIS and Record of Decision" be issued in a timely manner so that gas development can continue in this area without further delay.

Sincerely,

Paul Kalivas
289 Apache Lane
Rock Springs, Wy.
82901

RECEIVED
JUN 30 1999
BUREAU OF LAND MANAGEMENT
RAWLINS FIELD OFFICE

7.2.41.2 Letter 41 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

7.2.42.2 Letter 42 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

7.2.43.1 Letter 43 - David T. Johnson

June 28, 1999

Mr. Clare Miller
Rawlins Field Office
Bureau of Land Management
P. O. Box 2407
Rawlins, Wyoming 82301-2407

Re: Continental Divide / Wamsutter II Draft EIS
COMMENTS

Dear Mr. Miller:

As a concerned citizen and resident of the State of Wyoming, I would like to thank you for this opportunity to comment on the Continental Divide / Wamsutter II Draft Environmental Impact Statement.

The Draft Document addresses many Impacts and it appears that the majority of the Impacts will be "Insignificant" under the Proposed Action of Full Development. One impact that will not be Insignificant is the Socioeconomic Impact to the State of Wyoming through the increase of Tax Revenues and Royalties that this Development will generate for the State. Because of oil and gas development within this State, sales taxes have been non-existent and property taxes have been held to a minimum. Our Schools have also reaped the benefit from royalties paid to the State.

I am in agreement of the "Proposed Action" of Full Development as presented in the Draft Document. The Final EIS and Record of Decision should be issued in a timely manner so that gas development can continue in this area without further delay.

Sincerely,

David T. Johnson
2201 11th St.
Cody, Wy 82414

RECEIVED
JUN 30 1999
BUREAU OF LAND MANAGEMENT
RAWLINS FIELD OFFICE

7.2.44.1 Letter 44 - Lloy Dene Greb

June 28, 1999

Mr. Clare Miller
Rawlins Field Office
Bureau of Land Management
P. O. Box 2407
Rawlins, Wyoming 82301-2407

Re: Continental Divide / Wamsutter II Draft EIS
COMMENTS

Dear Mr. Miller:

As a concerned citizen and resident of the State of Wyoming, I would like to thank you for this opportunity to comment on the Continental Divide / Wamsutter II Draft Environmental Impact Statement.

The Draft Document addresses many Impacts and it appears that the majority of the Impacts will be "Insignificant" under the Proposed Action of Full Development. One impact that will not be Insignificant is the Socioeconomic Impact to the State of Wyoming through the increase of Tax Revenues and Royalties that this Development will generate for the State. Because of oil and gas development within this State, sales taxes have been non-existent and property taxes have been held to a minimum. Our Schools have also reaped the benefit from royalties paid to the State.

I am in agreement of the "Proposed Action" of Full Development as presented in the Draft Document. The Final EIS and Record of Decision should be issued in a timely manner so that gas development can continue in this area without further delay.

Sincerely,

Lloy Dene Greb
2120 22nd Street
Cody, WY 82414

RECEIVED
JUN 30 1999
BUREAU OF LAND MANAGEMENT
RAWLINS FIELD OFFICE

7.2.43.2 Letter 43 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

7.2.44.2 Letter 44 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

7.2.45.1 Letter 45 - Caroline Trumbull

June 28, 1999

Mr. Clare Miller
Rawlins Field Office
Bureau of Land Management
P. O. Box 2407
Rawlins, Wyoming 82301-2407

Re: Continental Divide / Wamsutter II Draft EIS
COMMENTS

Dear Mr. Miller:

As a concerned citizen and resident of the State of Wyoming, I would like to thank you for this opportunity to comment on the Continental Divide / Wamsutter II Draft Environmental Impact Statement.

The Draft Document addresses many impacts and it appears that the majority of the impacts will be "insignificant" under the Proposed Action of Full Development. One impact that will not be Insignificant is the Socioeconomic Impact to the State of Wyoming through the increase of Tax Revenues and Royalties that this Development will generate for the State. Because of oil and gas development within this State, sales taxes have been non-existent and property taxes have been held to a minimum, although have increased significantly with the low oil prices in my county. Our Schools have also reaped the benefit from royalties paid to the State.

I am in agreement of the "Proposed Action" of Full Development as presented in the Draft Document. The Final EIS and Record of Decision should be issued in a timely manner so that gas development can continue in this area without further delay.

Sincerely,

Caroline Trumbull
1631 North Park Drive
Cody, WY 82414

RECEIVED
JUN 30 1999
BUREAU OF LAND MANAGEMENT
RAWLINS FIELD OFFICE

7.2.46.1 Letter 46 - Vicki L. Schoeber

June 28, 1999

Mr. Clare Miller
Bureau of Land Management – Rawlins Field Office
P. O. Box 2407
Rawlins, WY 82301-2407

Re: Continental Divide / Wamsutter II Draft EIS - Comments

Dear Mr. Miller:

As a concerned resident and Wyoming native, I would like to thank you for this opportunity to comment on the Continental Divide / Wamsutter II Draft Environmental Impact Statement.

I feel the draft document addresses many impacts and it appears that the majority of the impacts will be "insignificant" under the Proposed Action of Full Development. One impact that will not be insignificant is the Socioeconomic Impact to the State of Wyoming through the increase of tax revenues and royalties that this development will generate for the State. Because of oil and gas development within Wyoming, sales taxes have been non-existent and property taxes have been held to a minimum. Our schools have also reaped the benefit from royalties paid to the State.

I am in agreement of the "Proposed Action" of Full Development as presented in the draft document. Please issue the Final EIS and Record of Decision in a timely manner so that gas development can continue in this area without further delay.

Yours truly,

Vicki L. Schoeber
1201 Birch Lane
Cody, WY 82414

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JUN 30 1999
BUREAU OF LAND MANAGEMENT
RAWLINS FIELD OFFICE

7.2.45.2 Letter 45 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

7.2.46.2 Letter 46 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

7.2.47.1 Letter 47 - Steve Olenick

June 28, 1999

Mr. Clare Miller
Rawlins Field Office
Bureau of Land Management
P. O. Box 2407
Rawlins, Wyoming 82301-2407

Re: Continental Divide / Wamsutter II Draft EIS
COMMENTS

Dear Mr. Miller:

As a concerned citizen and resident of the State of Wyoming, I would like to thank you for this opportunity to comment on the Continental Divide / Wamsutter II Draft Environmental Impact Statement.

The Draft Document addresses many Impacts and it appears that the majority of the Impacts will be "Insignificant" under the Proposed Action of Full Development. Air Quality seems to be a major issue and the extended time that was taken to prepare the Air Quality Model and analyze its findings should prove supportive for the Proposed Action. In addition, wildlife issues appear to be thoroughly investigated and the Mitigation Measures that will need to be adhered to can be dealt with by the oil and gas operators. However, one impact that will not be Insignificant is the Socioeconomic Impact to the State of Wyoming through the increase of Tax Revenues and Royalties that this Development will generate for the State. Because of oil and gas development within this State, sales taxes have been non-existent and property taxes have been held to a minimum. Our Schools have also reaped the benefit from royalties paid to the State.

I am in agreement of the "Proposed Action" of Full Development as presented in the Draft Document. The Final EIS and Record of Decision should be issued in a timely manner so that gas development can continue in this area without further delay.

Sincerely,

Steve Olenick
1102 Willow Ln
Cody, WY 82414

RECEIVED
JUN 30 1999
BUREAU OF LAND MANAGEMENT
RAWLINS FIELD OFFICE

7.2.47.2 Letter 47 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

7.2.48.1 Letter 48 - Riley C. Skeen

June 28, 1999

Mr. Clare Miller
Rawlins Field Office
Bureau of Land Management
P. O. Box 2407
Rawlins, Wyoming 82301-2407

Re: Continental Divide / Wamsutter II Draft EIS
COMMENTS

Dear Mr. Miller:

As a concerned citizen and resident of the State of Wyoming, I would like to thank you for this opportunity to comment on the Continental Divide / Wamsutter II Draft Environmental Impact Statement.

The Draft Document addresses many Impacts. In my opinion, impacts will be"Insignificant" under the Proposed Action of Full Development. Air Quality seems to be a major issue and the extended time that was taken to prepare the Air Quality Model and analyze its findings should adequately support the Proposed Action.

Additionally, wildlife issues appear to be thoroughly investigated and the Mitigation Measures that will need to be adhered could and should be easily dealt with by the oil and gas operators.

Please note that one very important impact that will not be Insignificant is the Socioeconomic Impact to the State of Wyoming which we could lose or be adversely delayed. There will be Tax Revenues and Royalties that this Development will generate for the State.

To date, because of oil and gas development within this State, sales taxes have been non-existent and property taxes have been held to a minimum. Our Schools have also reaped the benefit from royalties paid to the State.

I am in agreement of the "Proposed Action" of Full Development as presented in the Draft Document. The Final EIS and Record of Decision should be issued in a timely manner so that gas development can continue in this area without further delay.

Sincerely,

Riley C. Skeen
124 Siddle Drive
Cody, Wyoming 82414

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BUREAU OF LAND MANAGEMENT
RAWLINS FIELD OFFICE

7.2.48.2 Letter 48 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

7.2.49.1 Letter 49 - Todd Fields

June 29, 1999

Mr. Clare Miller
Rawlins Field Office
Bureau of Land Management
P. O. Box 2407
Rawlins, Wyoming 82301-2407

Re: Continental Divide / Wamsutter II Draft EIS
COMMENTS

Dear Mr. Miller:

As a concerned citizen and resident of the State of Wyoming, I would like to thank you for this opportunity to comment on the Continental Divide / Wamsutter II Draft Environmental Impact Statement.

The Draft Document addresses many Impacts and it appears that the majority of the Impacts will be "Insignificant" under the Proposed Action of Full Development. One impact that will not be Insignificant is the Socioeconomic Impact to the State of Wyoming through the increase of Tax Revenues and Royalties that this Development will generate for the State. Because of oil and gas development within this State, sales taxes have been non-existent and property taxes have been held to a minimum. Our Schools have also reaped the benefit from royalties paid to the State.

I am in agreement of the "Proposed Action" of Full Development as presented in the Draft Document. For the sake of all our children please see that the "Final EIS and Record of Decision" be issued in a timely manner so that gas development can continue in this area without further delay.

Sincerely,

Todd Fields
1700 Swansoo Dr. #206
Rock Springs, Wy.
82901

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RAWLINS FIELD OFFICE

7.2.50.1 Letter 50 - Richard Krupper

June 29, 1999

Mr. Clare Miller
Rawlins Field Office
Bureau of Land Management
P. O. Box 2407
Rawlins, Wyoming 82301-2407

Re: Continental Divide / Wamsutter II Draft EIS
COMMENTS

Dear Mr. Miller:

As a concerned citizen and resident of the State of Wyoming, I would like to thank you for this opportunity to comment on the Continental Divide / Wamsutter II Draft Environmental Impact Statement.

The Draft Document addresses many Impacts and it appears that the majority of the Impacts will be "Insignificant" under the Proposed Action of Full Development. One impact that will not be Insignificant is the Socioeconomic Impact to the State of Wyoming through the increase of Tax Revenues and Royalties that this Development will generate for the State. Because of oil and gas development within this State, sales taxes have been non-existent and property taxes have been held to a minimum. Our Schools have also reaped the benefit from royalties paid to the State.

I am in agreement of the "Proposed Action" of Full Development as presented in the Draft Document. For the sake of all our children please see that the "Final EIS and Record of Decision" be issued in a timely manner so that gas development can continue in this area without further delay.

Sincerely,

Richard Krupper
618 Stilley Ave.
Evanston Wy 82930

7.2.49.2 Letter 49 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

7.2.50.2 Letter 50 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

7.2.51.1 Letter 51 - Robert C. Balsam

June 28, 1999

Mr. Clare Miller
Rawlins Field Office
Bureau of Land Management
P. O. Box 2407
Rawlins, Wyoming 82301-2407

Re: Continental Divide / Wamsutter II Draft EIS
COMMENTS

Dear Mr. Miller:

As a concerned citizen and resident of the State of Wyoming, I would like to thank you for this opportunity to comment on the Continental Divide / Wamsutter II Draft Environmental Impact Statement. The Draft Document addresses many Impacts and it appears that the majority of the Impacts will be "Insignificant" under the Proposed Action of Full Development. Air Quality seems to be a major issue and the extended time that was taken to prepare the Air Quality Model and analyze its findings should prove supportive for the Proposed Action.

I am in agreement of the "Proposed Action" of Full Development as presented in the Draft Documents. The Final EIS and Record of Decision should be issued in a timely manner so that gas development can continue in this area without further delay.

Sincerely,

Robert C. Balsam

Robert C. Balsam

7.2.52.1 Letter 52 - Michael S. Motsch

June 29, 1999

Mr. Clare Miller
Rawlins Field Office
Bureau of Land Management
P. O. Box 2407
Rawlins, Wyoming 82301-2407

Re: Continental Divide / Wamsutter II Draft EIS
COMMENTS

Dear Mr. Miller:

As a concerned citizen, outdoorsman, tax payer, and 41 year resident (native) of the State of Wyoming, I would like to take this opportunity to comment on the Continental Divide / Wamsutter II Draft Environmental Impact Statement.

- The Draft Document addresses many Impacts and it appears that the majority of the Impacts will be "Insignificant" under the Proposed Action of Full Development. Wildlife issues appear to be thoroughly investigated and the Mitigation Measures that will need to be adhered to can be dealt with by the oil and gas operators.

I am in agreement of the "Proposed Action" of Full Development as presented in the Draft Document. The Final EIS and Record of Decision should be issued in a timely manner so that gas development can continue in this area without further delay.

Sincerely,

Michael S. Motsch

Michael S. Motsch
12 Pinto Road
Cody, Wyoming
82414

7.2.51.2 Letter 51 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

7.2.52.2 Letter 52 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

7.2.53.1 Letter 53 - James Dale Malody

June 28, 1999

Mr. Clare Miller
Rawlins Field Office
Bureau of Land Management
P. O. Box 2407
Rawlins, Wyoming 82301-2407

Re: Continental Divide / Wamsutter II Draft EIS
COMMENTS

Dear Mr. Miller:

As a concerned citizen and resident of the State of Wyoming, I would like to thank you for this opportunity to comment on the Continental Divide / Wamsutter II Draft Environmental Impact Statement.

The Draft Document addresses many impacts and it appears that the majority of the Impacts will be "Insignificant" under the Proposed Action of Full Development. One impact that will not be Insignificant is the Socioeconomic Impact to the State of Wyoming through the increase of Tax Revenues and Royalties that this Development will generate for the State. Because of oil and gas development within this State, sales taxes have been non-existent and property taxes have been held to a minimum. Our Schools have also reaped the benefit from royalties paid to the State.

I am in agreement of the "Proposed Action" of Full Development as presented in the Draft Document. The Final EIS and Record of Decision should be issued in a timely manner so that gas development can continue in this area without further delay.

Sincerely,

James Dale Malody
2304 Steadman
Cody, Wyoming 82414

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7.2.54.1 Letter 54 - Jared Hall

June 28, 1999

Mr. Clare Miller
Rawlins Field Office
Bureau of Land Management
P. O. Box 2407
Rawlins, Wyoming 82301-2407

Re: Continental Divide / Wamsutter II Draft EIS
COMMENTS

Dear Mr. Miller:

As a concerned citizen and resident of the State of Wyoming, I would like to thank you for this opportunity to comment on the Continental Divide / Wamsutter II Draft Environmental Impact Statement.

The Draft Document addresses many impacts and it appears that the majority of the Impacts will be "Insignificant" under the Proposed Action of Full Development. One impact that will not be Insignificant is the Socioeconomic Impact to the State of Wyoming through the increase of Tax Revenues and Royalties that this Development will generate for the State. Because of oil and gas development within this State, sales taxes have been non-existent and property taxes have been held to a minimum. Our Schools have also reaped the benefit from royalties paid to the State.

I am in agreement of the "Proposed Action" of Full Development as presented in the Draft Document. The Final EIS and Record of Decision should be issued in a timely manner so that gas development can continue in this area without further delay.

Sincerely,

Jared Hall
1958 Beck Ave., Apt. 2
Cody, WY 82414

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RAWLINS FIELD OFFICE

7.2.53.2 Letter 53 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

7.2.54.2 Letter 54 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

7.2.55.1 Letter 55 - Tom Fitzsimmons

June 29, 1999

Mr. Clare Miller
Rawlins Field Office
Bureau of Land Management
P. O. Box 2407
Rawlins, Wyoming 82301-2407

Re: Continental Divide / Wamsutter II Draft EIS
COMMENTS

Dear Mr. Miller:

As a concerned citizen and resident of the State of Wyoming, I would like to thank you for this opportunity to comment on the Continental Divide / Wamsutter II Draft Environmental Impact Statement.

The Draft Document addresses many Impacts and it appears that the majority of the Impacts will be "Insignificant" under the Proposed Action of Full Development. One impact that will not be Insignificant is the Socioeconomic Impact to the State of Wyoming through the increase of Tax Revenues and Royalties that this Development will generate for the State. Because of oil and gas development within this State, sales taxes have been non-existent and property taxes have been held to a minimum. Our Schools have also reaped the benefit from royalties paid to the State.

I am in agreement of the "Proposed Action" of Full Development as presented in the Draft Document. For the sake of all our children please see that the "Final EIS and Record of Decision" be issued in a timely manner so that gas development can continue in this area without further delay.

Sincerely,

Tom Fitzsimmons
1030 Red Butte Ave
Cody, WY
82414

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BUREAU OF LAND MANAGEMENT
RAWLINS FIELD OFFICE

7.2.56.1 Letter 56 - Mark Fisher

June 29, 1999

Mr. Clare Miller
Rawlins Field Office
Bureau of Land Management
P. O. Box 2407
Rawlins, Wyoming 82301-2407

Re: Continental Divide / Wamsutter II Draft EIS
COMMENTS

Dear Mr. Miller:

As a concerned citizen and resident of the State of Wyoming, I would like to thank you for this opportunity to comment on the Continental Divide / Wamsutter II Draft Environmental Impact Statement.

Draft Document addresses many Impacts and it appears that the majority of the Impacts will be "Insignificant" under the Proposed Action of Full Development. One impact that will not be Insignificant is the Socioeconomic Impact to the State of Wyoming through the increase of Tax Revenues and Royalties that this Development will generate for the State. Because of oil and gas development within this State, income taxes have been non-existent, sales taxes have been low and property taxes have been held to a minimum. Our Schools have also reaped the benefit from royalties paid to the State.

I am in agreement of the "Proposed Action" of Full Development as presented in the Draft Document. The Final EIS and Record of Decision should be issued in a timely manner so that gas development can continue in this area without further delay.

Sincerely,

Mark Fisher
2214 Cedar Lane
Cody, WY 82414

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BUREAU OF LAND MANAGEMENT
RAWLINS FIELD OFFICE

7.2.55.2 Letter 55 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

7.2.56.2 Letter 56 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

7.2.57.1 Letter 57 - Gary M. Lewis

June 28, 1999

Mr. Clare Miller
Rawlins Field Office
Bureau of Land Management
P. O. Box 2407
Rawlins, Wyoming 82301-2407

Re: Continental Divide / Wamsutter II Draft EIS
COMMENTS

Dear Mr. Miller:

I would like to thank you for this opportunity to comment on the Continental Divide / Wamsutter II Draft Environmental Impact Statement. I am a concerned resident of the State of Wyoming. I have been employed in the oil and gas exploration and production business in Wyoming for over 15 years. I am in agreement of the "Proposed Action" of Full Development as presented in the Draft Document. The Final EIS and Record of Decision should be issued without further delay to allow gas development in this area to start.

The Draft Document addresses many impacts. The majority of the impacts will be "Insignificant" under the Proposed Action of Full Development. Air Quality is a major concern in Wyoming. The Air Quality Model proves the insignificant impacts gas development has on air quality and supports for the "Proposed Action."

The socioeconomic impact to the State of Wyoming through Full Development will be "Significant" through increased jobs, salaries, tax revenues and royalties. Mineral development within this State has held personal tax burdens to a minimum. Wyoming now faces a major problem financing education and school construction. Responsible gas development in the Wamsutter area as recommended by the "Proposed Action" should not be delayed.

Sincerely,

Gary M. Lewis
39 N. 41st Street
Cody, WY 82414

7.2.58.1 Letter 58 - Gene R. George, Agent for Yates Petroleum Corp.

GENE R. GEORGE & ASSOCIATES, Inc.
305 West "A" Street, Suite 101
P. O. Box 2773, Casper, Wyoming 82602
307 265-1999, Fax: 307 473-7138

Petroleum Geology
Hydrogeology
Regulatory Permitting and Compliance

June 30, 1999

Clare Miller
Rawlins Field Office
Bureau of Land Management
P.O. Box 2407
Rawlins, WY 82301-2407

Re: Comments on Draft EIS Continental Divide/Wamsutter II Natural Gas Project

Dear Clare:

The following comments are submitted on behalf of Yates Petroleum Corporation. Yates has extensive leasehold in the EIS study area and has drilled several exploratory wells and plans more exploratory and development wells in the study area. Yates appreciates this opportunity to comment on the Draft EIS.

It is important to read the list of Applicant-Committed Mitigation/Environmental Protection Measures on pages 2-30, Section 2.6.13. These commitments for federal lands coupled with the Reclamation Plan, the Transportation Plan and the Wildlife Protection Plan all allow a determination of no significant impact from the project. Even the occasional suggestion that the Proposed Action might cause significant impacts to soils or vegetation are not specific and would be prevented by the site-specific EA completed by the BLM for each APD. For example, on page 4-31, Section 4.1.6.1, "Impacts to soils from the Proposed Action may be significant due to the potential for revegetation of stabilized dunes...". The site-specific EA and the Reclamation Plan supported by the Transportation Plan would all render impacts to soils insignificant just as they would be under Alternatives A and B. The applicant-committed mitigations would assure that soils would be reclaimed and dunes stabilized.

Following Chapter 4, Environmental Consequences, Mitigation and Monitoring, Yates has the following specific comments:

1. Air Quality: The project is below PSD increment limits. Because of the conservative modeling and the assumption that all wells would be successful and would produce at maximum rates, the model-predicted one day at 1.86 decview change would not likely happen. The modeling shows no significant impacts for acid deposition or effect to mountain lakes. Yates finds that the applicant-committed mitigations are fully protective of air quality. Yates would object to adding any of the additional potential BLM-required mitigations since no significant impacts are determined by the NEPA cumulative effects analysis. WDEQ/AQD requires controls on motors to meet air quality standards. The section of re-injection of well gasses is very objectionable. CO2 is not a significant component of the gas (table 2.5) and would not be separated at the

7.2.57.2 Letter 57 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

Letter 58 - Gene R. George, Agent for Yates Petroleum Corp., Page 2

1. well site. Re-injecting gas is uneconomic, and would dilute the product in the reservoir rendering it uneconomic at an earlier date and would waste resource. BLM has no authority to place a "cap" or to initiate emission tracing as is clearly stated in the analysis. No long-term cancer risk is potential from exposure to the HAP emissions from the project which alleviates the fear of activity proximal to residences.
2. Topography and Physiography: The applicant-committed mitigations and the attached plans support a no significant impact finding.
3. Mineral Resources: No significant impact.
4. Geologic Hazards: No significant impact. Dunes would be stabilized by the applicant-committed mitigations, the Reclamation Plan and the site-specific EA.
5. Paleontological Resources: Addressed by lease stipulations and applicant-committed mitigations.
6. Soils: Suggests that significant impacts could if dunes were reactivated. See the discussion in the second paragraph of this letter. All additional potential BLM-required mitigations are covered by BLM normal operating procedures and the Reclamation Plan.
7. Surface and Ground Water: No significant impacts anticipated. Additional potential BLM-required mitigations generally include mitigation normally required by BLM. Monitoring for sedimentation and water quality should be left to WDEQ where the proper jurisdiction lies.
8. Noise and Odor: The noise occurs as a short duration while drilling. This is unlikely to cause residents to move. Modifications to reduce flaring are under the jurisdiction of WDEQ and were shown by analysis to not be dangerous to humans from the project.
9. Vegetation: The only potential impact is in dune areas which has been covered in previous parts of this letter. Most of the BLM-required mitigations are already commonly followed by all operators.
10. Wetlands and Riparian Areas: Covered by applicant-committed mitigations and by COE Section 404 rules.
11. Wildlife and Fisheries: Yates does not agree that under the Proposed Action significant impacts could occur to big game or raptors. The Wildlife Protection Plan, lease stipulations and applicant-committed mitigations all protect these resources. The area will be drilled on 160-acre spacing (as allowed by WOGCC) and thus the impacts would be the same as under Alternative B. Yates is committed to wildlife protection and believes that the Wildlife Plan and lease stipulations and normal stipulations from the BLM on the APD will be sufficient to protect wildlife.
12. Wild Horses. No significant impact.
13. Federal Threatened and Endangered/State Sensitive Species: No adverse effects are anticipated.
14. Cultural and Historic Resources: No significant impact. Fully protected by applicant-committed mitigations and APD requirements.
15. Socioeconomics: Many positive results will occur from this project in the form of employment, taxes and production of natural gas which improves the Country's

Letter 58 - Gene R. George, Agent for Yates Petroleum Corp., Page 3

air quality. The noise is a short duration issue and will not likely displace any residents.

16. Land Use: Noise and visual impacts are of short duration and will not likely displace residents. The Transportation Plan is a model for all ensuing federal efforts. This will improve the road and access infrastructure for all users. Yates and other companies have already voluntarily donated money to improve BLM roads.

17. Aesthetics and Visual Resources: The only possible impact is if wells are drilled on 80-acre spacing. The WOGCC currently only allows 160-acre spacing. It is very unlikely, given the geology of the gas reservoirs in this area that lesser spacing will be economic or necessary to recover the natural gas resource.

Yates Petroleum Corporation recommends that the BLM allow natural gas exploration and development in the EIS study area under the Proposed Action. There are more than adequate protections for all resources in the applicant-committed mitigations and in the attached plans. Yates desires to be allowed to further explore its federal and state oil and gas leasehold at the earliest possible time. The air quality analysis used the latest model and was supported by the stakeholders protocol group and by the Southwest Wyoming Air Technical Forum. This project will aid the rest of the United States in meeting the requirements of the Clean Air Act by producing clean-burning natural gas from this environmentally safe, sensitive and proactive project.

Sincerely,

Gene R. George, Regulatory Issues Agent for Yates Petroleum Corporation

Copy: Janet Richardson, Lisa Norton, Yates Petroleum Corporation
Al Pierson, Wyoming State Director BLM
Hon. Barbara Cubin, Wyoming U. S. Representative

Yates\GGZ\WSI\Comments 3 CD/WSII DEIS

7.2.59.1 Letter 59 - Weatherford

Weatherford

Rawlins & Rawlins Services

87 Mesa Drive
Rock Springs, Wyoming 82901

P.O. Box 69
Rock Springs, Wyoming 82902-0069

307/382-4884
Telefax: 307/382-4982

June 30, 1999

Mr. Clare Miller
Rawlins Field Office
Bureau of Land Management
P.O. Box 2407
Rawlins, WY 82301-2407

Re: Continental Divide/Wamsutter II Draft EIS
COMMENTS

Dear Mr. Miller:

As a concerned citizen and resident of the State of Wyoming, I would like to thank you for this opportunity to comment on the Continental Divide/Wamsutter II Draft Environmental Impact Statement.

The Draft Document addresses many impacts and it appears that the majority of the impacts will be "insignificant" under the Proposed Action of Full Development. One impact that will not be insignificant is the Socioeconomic Impact to the State of Wyoming through the increase of Tax Revenues and Royalties that this Development will generate for the State. Because of oil and gas development within this State, sales taxes have been non-existent and property taxes have been held to a minimum. Our schools have also reaped the benefit from royalties paid to the State.

I am in agreement of the "Proposed Action" of Full Development as presented in the Draft Document. For the sake of all our children please see that the "Final EIS and Record of Decision" be issued in a timely manner so that gas development can continue in this area without further delay.

Sincerely,

Mark Cox	Marlene Kauppi	Kevin Reardon	
Gary Brown	Randy Kessner	Jay Reed	
Kelly Hanberg	John Klouzek	Mike Romango	
Russ Hennerman	Ralph Muldrew	Alvin Schmaltz	
Jim Hoffman	Chris Martinez	Birch Smith	
Barbara Jones	Tony Moore	Jim Smith	

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RAWLINS FIELD OFFICE

7.2.58.2 Letter 58 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

Comment Response 1 - As shown in the DEIS and Air Quality Impact Assessment Technical Support Document, no significant project-specific air quality impacts are anticipated. Therefore, it is logical to conclude that mitigation or monitoring to offset project-specific impacts would not be necessary. Furthermore, as clearly stated in the DEIS, the BLM is limited in its authority to apply many of the air quality mitigations identified in this EIS. However, the final decision regarding the mitigative actions that would be required for this project will be identified in the ROD.

Comment Response 2 - Commented noted. Please refer to Letter 18 (Section 7.2.18.2), Comment Response 1, in this FEIS.

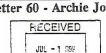
Comment Response 3 - Comment noted. Please refer to Letter 18 (Section 7.2.18.2), Comment Response 1, in this FEIS.

Comment Response 4 - Please refer to Letter 18 (Section 7.2.18.2), Comment Responses 4 and 5, in this FEIS.

7.2.59.2 Letter 59 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

7.2.60.1 Letter 60 - Archie Johnson



June 25, 1999

Mr Clare Miller
Rawlins Field Office
Bureau of Land Management
Rawlins, Wy. 82301

Re: Continental Divide / Wamsutter II EIS/comment

Dear Mr. Miller:

As a resident and citizen of Wyoming, I would like to thank you for the opportunity to comment on the Draft Environmental Impact Statement.

It appears that nearly all the adverse "impacts" of the Full Development proposed action are judged to be "insignificant" & agree 100%. The major impact of not moving the "Full Development" action will be the loss of a very large amount of revenue to the local, school, county and State governments. This economic impact to the governmental bodies and schools will be magnified by the increased loss of oil and gas industries that will cause lingering closure of no future potential if the "Full Development" action is not granted.

I do not feel that there will be any significant impact on our air quality from this development as the industry has proven in the past its ability to operate within the standards now in effect and has even cleaned up its activity fields to a much higher standard than required.

Letter 60 - Archie Johnson, Page 2

The industry (all others) has taken its care for the wildlife issues in the past by timely impacts on the black footed ferret, golden eagle, and other migratory birds with pro-active environmental actions.

I am in agreement with the Proposed Action of Full Development as presented in the Draft Finding of Record of Decision should be issued in a rapid manner and that all upcoming can disrupt from proper development of its natural resources.

Thank you
Archie Johnson
Archie Johnson
905 Aspen Dr
Cody Wy. 82414

7.2.60.2 Letter 60 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

7.2.61.1 Letter 61 - Brad Funston

June 29, 1999

Mr. Clare Miller
Rawlins Field Office
Bureau of Land Management
P. O. Box 2407
Rawlins, Wyoming 82301-2407

Re: Continental Divide / Wamsutter II Draft EIS
COMMENTS

Dear Mr. Miller:

As a concerned citizen and resident of the State of Wyoming, I would like to thank you for this opportunity to comment on the Continental Divide / Wamsutter II Draft Environmental Impact Statement.

The Draft Document addresses many impacts and it appears that the majority of the impacts will be "insignificant" under the Proposed Action of Full Development. One impact that will not be insignificant is the Socioeconomic impact to the State of Wyoming through the increase of Tax Revenues and Royalties that this Development will generate for the State. Because of oil and gas development within this State, sales taxes have been non-existent and property taxes have been held to a minimum. Our Schools have also reaped the benefit from royalties paid to the State.

I am in agreement of the "Proposed Action" of Full Development as presented in the Draft Document. The Final EIS and Record of Decision should be issued in a timely manner so that gas development can continue in this area without further delay.

Sincerely,

Brad Funston

7.2.61.2 Letter 61 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

7.2.62.2 Letter 62 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

7.2.62.1 Letter 62 - Heather Pence

June 28, 1999

Mr. Clare Miller
Rawlins Field Office
Bureau of Land Management
P. O. Box 2407
Rawlins, Wyoming 82301-2407

Re: Continental Divide / Wamsutter II Draft EIS
COMMENTS

Dear Mr. Miller:

As a concerned citizen and resident of the State of Wyoming, I would like to thank you for this opportunity to comment on the Continental Divide / Wamsutter II Draft Environmental Impact Statement.

The Draft Document addresses many Impacts and it appears that the majority of the Impacts will be "Insignificant" under the Proposed Action of Full Development. One impact that will not be Insignificant is the Socioeconomic Impact to the State of Wyoming through the increase of Tax Revenues and Royalties that this Development will generate for the State. Because of oil and gas development within this State, sales taxes have been non-existent and property taxes have been held to a minimum. Our Schools have also reaped the benefit from royalties paid to the State.

I am in agreement of the "Proposed Action" of Full Development as presented in the Draft Document. The Final EIS and Record of Decision should be issued in a timely manner so that gas development can continue in this area without further delay.

Sincerely,

Heather Pence

RECEIVED
JUL - 1 1999
BUREAU OF LAND MANAGEMENT
RAWLINS FIELD OFFICE

7.2.63.1 Letter 63 - Darlene McKnight

June 29, 1999

Mr. Clare Miller
Rawlins Field Office
Bureau of Land Management
P. O. Box 2407
Rawlins, Wyoming 82301-2407

Re: Continental Divide / Wamsutter II Draft EIS
COMMENTS

Dear Mr. Miller:

As a concerned citizen and resident of the State of Wyoming, I would like to thank you for this opportunity to comment on the Continental Divide / Wamsutter II Draft Environmental Impact Statement.

The Draft Document addresses many Impacts and it appears that the majority of the Impacts will be "Insignificant" under the Proposed Action of Full Development. One impact that will not be Insignificant is the Socioeconomic Impact to the State of Wyoming through the increase of Tax Revenues and Royalties that this Development will generate for the State. Because of oil and gas development within this State, sales taxes have been non-existent and property taxes have been held to a minimum. Our Schools have also reaped the benefit from royalties paid to the State.

I am in agreement of the "Proposed Action" of Full Development as presented in the Draft Document. The Final EIS and Record of Decision should be issued in a timely manner so that gas development can continue in this area without further delay.

Sincerely,

Darlene McKnight

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BUREAU OF LAND MANAGEMENT
RAWLINS FIELD OFFICE

7.2.63.2 Letter 63 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

7.2.64.2 Letter 64 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

7.2.64.1 Letter 64 - Charles Ohlson

June 28, 1999

Mr. Clare Miller
Rawlins Field Office
Bureau of Land Management
P. O. Box 2407
Rawlins, Wyomiog 82301-2407

Re: Continental Divide / Wamsutter II Draft EIS
COMMENTS

Dear Mr. Miller:

As a concerned citizen and resident of the State of Wyoming, I would like to thank you for this opportunity to comment on the Continental Divide / Wamsutter II Draft Environmental Impact Statement.

The Draft Document addresses many Impacts and it appears that the majority of the Impacts will be "Insignificant" under the Proposed Action of Full Development. One impact that will not be Insignificant is the Socioeconomic Impact to the State of Wyoming through the Increase of Tax Revenues and Royalties that this Development will generate for the State. Because of oil and gas development within this State, sales taxes have been non-existent and property taxes have been held to a minimum. Our Schools have also reaped the benefit from royalties paid to the State.

I am in agreement of the "Proposed Action" of Full Development as presented in the Draft Document. The Final EIS and Record of Decision should be issued in a timely manner so that gas development can continue in this area without further delay.

Sincerely,

Charles Ohlson

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BUREAU OF LAND MANAGEMENT
RAWLINS FIELD OFFICE

7.2.65.1 Letter 65 - Jon Salomonsen

June 28, 1999

Mr. Clare Miller
Rawlins Field Office
Bureau of Land Management
P. O. Box 2407
Rawlins, Wyoming 82301-2407

Re: Continental Divide / Wamsutter II Draft EIS
COMMENTS

Dear Mr. Miller:

As a concerned citizen and resident of the State of Wyoming, I would like to thank you for this opportunity to comment on the Continental Divide / Wamsutter II Draft Environmental Impact Statement.

The Draft Document addresses many Impacts and it appears that the majority of the Impacts will be "Insignificant" under the Proposed Action of Full Development. Air Quality seems to be a major issue and the extended time that was taken to prepare the Air Quality Model and analyze its findings should prove supportive for the Proposed Action.

In addition, one impact that will not be Insignificant is the Socioeconomic Impact to the State of Wyoming through the increase of Tax Revenues and Royalties that this Development will generate for the State. Because of oil and gas development within this State, sales taxes have been non-existent and property taxes have been held to a minimum. Our Schools have also reaped the benefit from royalties paid to the State.

I am in agreement of the "Proposed Action" of Full Development as presented in the Draft Document. The Final EIS and Record of Decision should be issued in a timely manner so that gas development can continue in this area without further delay.

Sincerely,

Jon Salomonsen

RECEIVED
JUL - 7 1999
BUREAU OF LAND MANAGEMENT
RAWLINS FIELD OFFICE

7.2.65.2 Letter 65 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

7.2.66.2 Letter 66 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

7.2.66.1 Letter 66 - Cynthia A. Truby

June 28, 1999

Mr. Clare Miller
Rawlins Field Office
Bureau of Land Management
P. O. Box 2407
Rawlins, Wyoming 82301-2407

Re: Continental Divide / Wamsutter II Draft EIS
COMMENTS

Dear Mr. Miller:

As a concerned citizen and resident of the State of Wyoming, I would like to thank you for this opportunity to comment on the Continental Divide / Wamsutter II Draft Environmental Impact Statement.

The Draft Document addresses many impacts and it appears that the majority of the impacts will be "insignificant" under the Proposed Action of Full Development. Wildlife issues appear to be thoroughly investigated and the Mitigation Measures that will need to be adhered to can be dealt with by the oil and gas operators.

I am in agreement of the "Proposed Action" of Full Development as presented in the Draft Document. The Final EIS and Record of Decision should be issued in a timely manner so that gas development can continue in this area without further delay.

Sincerely,

Cynthia A. Truby

RECEIVED
JUL 7 1999
BUREAU OF LAND MANAGEMENT
RAWLINS FIELD OFFICE

7.2.67.1 Letter 67 - Eric Ward

June 29, 1999

Mr. Clare Miller
Rawlins Field Office
Bureau of Land Management
P. O. Box 2407
Rawlins, Wyoming 82301-2407

Re: Continental Divide / Wamsutter II Draft EIS
COMMENTS

Dear Mr. Miller:

As a concerned citizen and resident of the State of Wyoming, I would like to thank you for this opportunity to comment on the Continental Divide / Wamsutter II Draft Environmental Impact Statement.

The Draft Document addresses many impacts and it appears that the majority of the impacts will be "insignificant" under the Proposed Action of Full Development. Two sensitive issues that the Draft Document thoroughly addressed include air quality and wildlife issues.

The emission inventory, near-field analysis and far-field analysis demonstrate a thorough investigation of potential air quality impacts. Conclusions from the analyses show compliance with applicable state and federal air quality regulations. Additionally, no significant, adverse impacts to air quality, like chemistry or visibility are likely to occur at any of the sensitive receptor areas due to the individual or cumulative actions.

Like air quality, wildlife issues appear to be thoroughly investigated. The mitigation measures to protect wildlife can be managed by the oil and gas operators.

I am in agreement of the "Proposed Action" of Full Development as presented in the Draft Document. The Final EIS and Record of Decision should be issued in a timely manner so that gas development can continue in this area without further delay.

Sincerely,

Eric Ward

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JUL - 1 1999
BUREAU OF LAND MANAGEMENT
RAWLINS FIELD OFFICE

7.2.67.2 Letter 67 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

7.2.68.2 Letter 68 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

7.2.68.1 Letter 68 - Jerry L. Guthrie

June 28, 1999

Mr. Clare Miller
Rawlins Field Office
Bureau of Land Management
P. O. Box 2407
Rawlins, Wyoming 82301-2407

Re: Continental Divide / Wamsutter II Draft EIS
COMMENTS

Dear Mr. Miller:

As a concerned citizen and resident of the State of Wyoming, I would like to thank you for this opportunity to comment on the Continental Divide / Wamsutter II Draft Environmental Impact Statement.

- The Draft Document addresses many impacts and it appears that the majority of the Impacts will be "Insignificant" under the Proposed Action of Full Development. One impact that will not be Insignificant is the Socioeconomic Impact to the State of Wyoming through the increase of Tax Revenues and Royalties that this Development will generate for the State. Because of oil and gas development within this State, sales taxes have been non-existent and property taxes have been held to a minimum. Our Schools have also reaped the benefit from royalties paid to the State.

I am in agreement of the "Proposed Action" of Full Development as presented in the Draft Document. The Final EIS and Record of Decision should be issued in a timely manner so that gas development can continue in this area without further delay.

Sincerely,

Jerry L. Guthrie

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JUL - 1 1999
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RAWLINS FIELD OFFICE

7.2.69.1 Letter 69 - Edward I. Hill

Edward I. Hill
4 South Marquette Court
Cody, WY 82414

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JUL - 1 1999
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RAWLINS FIELD OFFICE

June 28, 1999

Mr. Clare Miller
Rawlins Field Office
Bureau of Land Management
P. O. Box 2407
Rawlins, Wyoming 82301-2407

Re: COMMENTS - Continental Divide / Wamsutter II Draft EIS

Dear Mr. Miller:

As a concerned citizen and resident of the State of Wyoming, I would like to thank you for this opportunity to comment on the Continental Divide / Wamsutter II Draft Environmental Impact Statement.

The Draft Document addresses many Impacts and it appears that the majority of the Impacts will be "Insignificant" under the Proposed Action of Full Development. One impact that will not be Insignificant is the Socioeconomic Impact to the State of Wyoming through the increase of Tax Revenues and Royalties that this Development will generate for the State. Because of oil and gas development within this State, sales taxes have been non-existent and property taxes have been held to a minimum. Our Schools have also reaped the benefit from royalties paid to the State.

I am in agreement of the "Proposed Action" of Full Development as presented in the Draft Document. The Final EIS and Record of Decision should be issued in a timely manner so that gas development can continue in this area without further delay.

Sincerely,

Edward I. Hill

7.2.69.2 Letter 69 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

7.2.70.2 Letter 70 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

7.2.70.1 Letter 70 - Jeffrey T. Harvey

June 29, 1999

Mr. Clare Miller
Rawlins Field Office
Bureau of Land Management
P. O. Box 2407
Rawlins, Wyoming 82301-2407

Re: Continental Divide / Wamsutter II Draft EIS
COMMENTS

Dear Mr. Miller:

As a concerned citizen and resident of the State of Wyoming, I would like to thank you for this opportunity to comment on the Continental Divide / Wamsutter II Draft Environmental Impact Statement.

- The Draft Document addresses many impacts and it appears that the majority of the impacts will be "Insignificant" under the Proposed Action of Full Development. One impact that will not be Insignificant is the Socioeconomic Impact to the State of Wyoming through the increase of Tax Revenues and Royalties that this Development will generate for the State. Because of oil and gas development within this State, sales taxes have been non-existent and property taxes have been held to a minimum. Our Schools have also reaped the benefit from royalties paid to the State.

I am in agreement of the "Proposed Action" of Full Development as presented in the Draft Document. The Final EIS and Record of Decision should be issued in a timely manner so that gas development can continue in this area without further delay.

Sincerely,

Jeffrey T. Harvey

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JUL - 1 1999
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RAWLINS FIELD OFFICE

7.2.71.1 Letter 71 - Mark L. Dobson

RECEIVED
JUL - 1 1999
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RAWLINS FIELD OFFICE

June 29, 1999

Mr. Clare Miller
Rawlins Field Office
Bureau of Land Management
P. O. Box 2407
Rawlins, Wyoming 82301-2407

Re: Continental Divide / Wamsutter II Draft EIS
COMMENTS

Dear Mr. Miller:

As a concerned citizen and resident of the State of Wyoming, I would like to thank you for this opportunity to comment on the Continental Divide / Wamsutter II Draft Environmental Impact Statement.

- The Draft Document addresses many Impacts and it appears that the majority of the Impacts will be "Insignificant" under the Proposed Action of Full Development. Air Quality seems to be a major issue and the extended time that was taken to prepare the Air Quality Model and analyze its findings should prove supportive for the Proposed Action.
- The Draft Document addresses many Impacts and it appears that the majority of the Impacts will be "Insignificant" under the Proposed Action of Full Development. Wildlife issues appear to be thoroughly investigated and the Mitigation Measures that will need to be adhered to can be dealt with by the oil and gas operators.
- The Draft Document addresses many Impacts and it appears that the majority of the Impacts will be "Insignificant" under the Proposed Action of Full Development. One impact that will not be Insignificant is the Socioeconomic Impact to the State of Wyoming through the increase of Tax Revenues and Royalties that this Development will generate for the State. Because of oil and gas development within this State, sales taxes have been non-existent and property taxes have been held to a minimum. Our Schools have also reaped the benefit from royalties paid to the State.

I am in agreement of the "Proposed Action" of Full Development as presented in the Draft Document. The Final EIS and Record of Decision should be issued in a timely manner so that gas development can continue in this area without further delay.

Sincerely,

Mark L. Dobson

7.2.71.2 Letter 71 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

7.2.72.2 Letter 72 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

7.2.72.1 Letter 72 - Craig Barber

June 30, 1999

Mr. Clare Miller
Rawlins Field Office
Bureau of Land Management
P. O. Box 2407
Rawlins, Wyoming 82301-2407

Re: Continental Divide / Wamsutter II Draft EIS
COMMENTS

Dear Mr. Miller:

I am in agreement of the "Proposed Action" of Full Development as presented in the Draft Document. Please see that the "Final EIS and Record of Decision" be issued in a timely manner so that gas development can continue in this area without further delay.

As a concerned citizen and resident of the State of Wyoming, I would like to thank you for this opportunity to comment on the Continental Divide / Wamsutter II Draft Environmental Impact Statement.

Sincerely,
K.C. Barber
Craig Barber
800 Saratoga
Green River, WY
82935

RECEIVED
JUL - 2 1999
BUREAU OF LAND MANAGEMENT
RAWLINS FIELD OFFICE

7.2.73.1 Letter 73 - Tim Tipton

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JUL - 2 1999
BUREAU OF LAND MANAGEMENT
RAWLINS FIELD OFFICE

June 29, 1999

Mr. Clare Miller
Rawlins Field Office
Bureau of Land Management
P. O. Box 2407
Rawlins, Wyoming 82301-2407

Re: Continental Divide / Wamsutter II Draft EIS
COMMENTS

Dear Mr. Miller:

As a concerned citizen and resident of the State of Wyoming, I would like to thank you for this opportunity to comment on the Continental Divide / Wamsutter II Draft Environmental Impact Statement. I support the comments within the Draft, and encourage quick approval so that gas development can be initiated as soon as possible.

- Draft Document addresses many Impacts and it appears that the majority of the Impacts will be "Insignificant" under the Proposed Action of Full Development. One impact that will not be Insignificant is the Socioeconomic Impact to the State of Wyoming through increased Tax Revenues and Royalties to the State. Because of oil and gas development within this State, sales taxes have been non-existent and property taxes have been held to a minimum. Our Schools have also reaped the benefit from royalties paid to the State.

I am in agreement of the "Proposed Action" of Full Development as presented in the Draft Document. The Final EIS and Record of Decision should be issued in a timely manner so that gas development can continue in this area without further delay.

Sincerely,

Tim Tipton
620 Skyline Drive
Cody, Wyoming 82414

7.2.73.2 Letter 73 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

7.2.74.2 Letter 74 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

7.2.74.1 Letter 74 - Joseph C. Icenogle

Joseph C. Icenogle
37 North Ridge Drive
Cody, WY 82414
(307) 527-5926

June 29, 1999

Mr. Clare Miller
Rawlins Field Office
Bureau of Land Management
P. O. Box 2407
Rawlins, Wyoming 82301-2407

Re: Continental Divide / Wamsutter II Draft EIS
COMMENTS

Dear Mr. Miller:

As a concerned citizen and resident of the State of Wyoming, I would like to thank you for this opportunity to comment on the Continental Divide / Wamsutter II Draft Environmental Impact Statement.

The Draft EIS addresses many speculated impacts in which the majority will be "Insignificant" under the Proposed Action of Full Development. While, air quality is perceived as a major issue, extended time was taken to prepare an Air Quality Model and the subsequent analysis, which prove supportive for the Proposed Action.

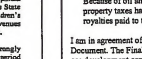
Wildlife issues appear to be thoroughly investigated and the mitigation measures appear to be easily obtainable by the oil and gas operators.

The impact that will not be Insignificant is the Socioeconomic Impact to the State of Wyoming and its people through the increase of tax revenues and royalties that the proposed development will generate for the people of the State. Historically, oil and gas development within this State has provided for low sales taxes and property taxes. However, more important our children's schools need the funding generated through the additional property and severance tax revenues and the State's share of federal royalties obtained from the proposed full field development.

I support the "Proposed Action" of Full Development as presented in the Draft EIS. I strongly encourage that the Final EIS and Record of Decision be issued in the shortest time period allowed by the National Environmental Policy Act of 1969, as amended.

Sincerely,

Joseph C. Icenogle



7.2.75.1 Letter 75 - Sandy Puettman

June 28, 1999

Mr. Clare Miller
Rawlins Field Office
Bureau of Land Management
P. O. Box 2407
Rawlins, Wyoming 82301-2407

Re: Continental Divide / Wamsutter II Draft EIS
COMMENTS

Dear Mr. Miller:

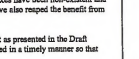
As a concerned citizen and native resident of the State of Wyoming, I would like to comment on the Continental Divide / Wamsutter II Draft Environmental Impact Statement.

- The Draft Document addresses many Impacts. It seems that many of the Impacts will be "Insignificant" under the Proposed Action of Full Development. Wildlife issues appear to be thoroughly investigated. The Mitigation Measures should be handled by the oil and gas operators.
- The Draft Document addresses many Impacts and it appears that the majority of the Impacts will be "Insignificant" under the Proposed Action of Full Development. One impact that will not be Insignificant is the Socioeconomic Impact to the State of Wyoming through the increase of Tax Revenues and Royalties that this Development will generate for the State. Because of oil and gas development within this State, sales taxes have been non-existent and property taxes have been held to a minimum. Our Schools have also reaped the benefit from royalties paid to the State.

I am in agreement of the "Proposed Action" of Full Development as presented in the Draft Document. The Final EIS and Record of Decision should be issued in a timely manner so that gas development can continue in this area without further delay.

Sincerely,

Sandy Puettman



7.2.75.2 Letter 75 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

7.2.76.2 Letter 76 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

7.2.76.1 Letter 76 - William L.M. Wilsey

P.O. Box 193
Cody, WY 82414

June 30, 1999

Mr. Clare Miller
Rawlins Field Office
Bureau of Land Management
P. O. Box 2407
Rawlins, Wyoming 82301-2407

Re: Continental Divide / Wamsutter II Draft EIS
COMMENTS

Dear Mr. Miller:

I would like to comment on the Continental Divide / Wamsutter II Draft Environmental Impact Statement.

The Draft Document addresses many Impacts and it appears that the majority of the Impacts will be "Insignificant" under the Proposed Action of Full Development. Air quality and wildlife issues seem to have been well studied with measures proposed to sufficiently resolve them. One impact that will not be insignificant is the socioeconomic impact to the State of Wyoming through the increase of Tax Revenues and Royalties that this Development will generate for the State. Because of oil and gas development within this State, sales taxes have been non-existent and property taxes have been held to a minimum. Our Schools have also reaped the benefit from royalties paid to the State. As a parent with two small children in the most poorly funded school district in the state, I wish to see the oil and gas industry enabled to provide the tax dollars that will be critical to ensure continued funding of state schools at or above historical levels.

I am in agreement of the "Proposed Action" of Full Development as presented in the Draft Document. The Final EIS and Record of Decision should be issued as soon as possible so that environmentally responsible gas development can continue in this area without further delay.

Sincerely,

William L. M. Wilsey

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JUL - 2 1999
BUREAU OF LAND MANAGEMENT
RAWLINS FIELD OFFICE

7.2.77.1 Letter 77 - Mike Blevins

6/28/99

Ms. Clare Miller
Rawlins Field Office
BLM
P.O. Box 2407
Rawlins, WY 82301

RECEIVED
JUL - 6 1999
BUREAU OF LAND MANAGEMENT
RAWLINS FIELD OFFICE

Re: EIS - Continental Divide
Wamsutter II Natural Gas Project

Dear Ms. Miller:

I am a land owner in T 19 N, R 95 W in Sweetwater County, Wyoming. I fully support development of this area.

Note the scale on Map D-11 in your Transportation Plan. The General location of Map was the wrong T/R scale.

If you have any questions, please contact me.

M.J. Blevins Family Limited Partnership
Mike Blevins, General Partner
10808 Jo Ann
Willis, TX 77318
409-856-4478 (phone)
409-760-2658 (fax)

Sincerely,

Mike Blevins

7.2.77.2 Letter 77 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

Comment Response 1 - The map has been corrected (see FEIS Appendix B, Map B-1.1). Thank you for bringing this to our attention.

7.2.78.2 Letter 78 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

7.2.78.1 Letter 78 - Dan Haman

RECEIVED
JUL - 6 1999
BUREAU OF LAND MANAGEMENT
RAWLINS FIELD OFFICE

June 30, 1999

Mr. Clare Miller
Rawlins Field Office
Bureau of Land Management
P. O. Box 2407
Rawlins, Wyoming 82301-2407

Re: Continental Divide / Wamsutter II Draft EIS
COMMENTS

Dear Mr. Miller:

As a concerned citizen and resident of the State of Wyoming, I would like to thank you for this opportunity to comment on the Continental Divide / Wamsutter II Draft Environmental Impact Statement.

The Draft Document addresses many impacts and it appears that the majority of the impacts will be "insignificant" under the Proposed Action of Full Development. One impact that will not be insignificant is the Socioeconomic impact to the people living in the State of Wyoming and through the increase of Tax Revenues and Royalties that this Development will generate for the State. Because of oil and gas development within this State, sales taxes have been non-existent and property taxes have been held to a minimum. Our Schools have also reaped the benefit from royalties paid to the State. Lack of approval of this EIS will only drive our state's future further into economic disaster.

I am in agreement of the "Proposed Action" of Full Development as presented in the Draft Document. The "Final EIS and Record of Decision" should be issued in a timely manner so that gas development can continue in this area without further delay.

Sincerely,

Dan Haman

Dan Haman
905 Skyline Drive
Cody, Wyoming 82414

7.2.79.1 Letter 79 - Lyle Laverty, Regional Forester, U.S. Forest Service

United States Department of Agriculture | Forest Service | Rocky Mountain Region | P.O. Box 25127 Lakewood, CO 80225-0127 Delivery: 740 Simms St. Golden, CO 80401 Voice: 303-275-5350 TDD: 303-275-5367

File Code: 2580

Date: July 13, 1999

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JUL 22 1999
BUREAU OF LAND MANAGEMENT
RAWLINS FIELD OFFICE

Mr. Clare Miller
Rawlins Field Office
Bureau of Land Management
PO Box 2407 Rawlins, WY 82301-2407

Dear Mr. Miller:

This letter is to provide comments on air quality related impacts discussed in the Draft EIS for the South Baggs Natural Gas Development Project, the Draft EIS for the Continental Divide Wamsutter II Natural Gas Development Project, and the Air Quality Impact Assessment Technical Support Documents Continental Divide/Wamsutter II and South Baggs Natural Gas Development Project (AQTSD). As the air quality analysts was linked for both the South Baggs and Continental Divide EIS's, our comments here will cover both EIS's as well as the AQTSD. General concerns and issues common to all three documents are covered in this letter, while issues specific to each document are attached.

1 In general our major concern with these EIS's is regarding the visibility modeling process and potential visibility impact on Class I wilderness areas. The Forest Service's responsibilities to protect visibility in Class I areas from adverse air pollution impacts were set forth by Congress in the 1977 Clean Air Act. Under the Class Air Act Amendments, the Forest Service has the "affirmative responsibility" to protect the Air Quality Related Values including visibility (AQRVs) of the Class I areas that we manage from "adverse air pollution effects". Forest Service responsibilities for the management and protection of wilderness, including Class I wilderness, are also found in the Wilderness Act of 1964 and the regulations developed to implement that act.

2 The air quality analysis documented (using the methodology preferred by the Forest Service (FS), National Park Service (NPS), Wyoming Department of Environmental Quality (WYDEQ), National Park Service (NPS), Wyoming Department of Environmental Quality (WYDEQ), Environmental Protection Agency (EPA) and Interagency Working Group on Air Quality Environmental Protection Agency (EPA) and Interagency Working Group on Air Quality Modeling (IWAQM) that visibility impacts are above the Limit of Acceptable Change (level of concern) of the Forest Service on 5 days at Bridger Wilderness, 7 days at Popo Agie Wilderness, 6 days at Mt. Zirkel Wilderness, 6 days at Savage Run Wilderness, 4 days at Rawah Wilderness, and 1 day at Eagles Rest Wilderness. However, these modeling results are downplayed in the text, and not even mentioned in the executive summaries of the EIS's. Instead, the visibility methodology showing least improvement (of the five methodologies used in the modeling analyses) was selected as the impact to be discussed in the executive summaries of both EIS's and the conclusions section in the Air Quality Technical Support Document. In addition, the same series of visibility impacts uses the BLM's level of concern of 1.0 deciview, rather than the Forest Service's level of concern of .5 deciview. As we discussed in our 11-3-97 letter to Al

3

Letter 79 - Lyle Laverty, Regional Forester, U.S. Forest Service, Page 2

3 Pearson, Wyoming State Director of the BLM. If I.0 decisive visibility impairment (noticeable change) were to be allowed, then the Forest Service would not be able to meet Congress's goal of "the prevention of any future and the remedying of any existing impairment of visibility in mandatory Class I Federal areas which impairment results from manmade air pollution". It is our position that in its above range "any" impairment means any perceptible visibility impairment. Therefore, a level of concern of .5 decisive is much more likely to prevent future visibility impairment in the Class I areas that we manage. More importantly, we believe that the land management agency of the wilderness that may receive the pollutant impacts should set the limits of acceptable change or levels of concern that will be used in all EIS analyses.

4

5 If the EIS's issued can "the combination of the two approaches (Method 2 and Method 4) provides a reasonable bracketing of the likely impacts on visibility" (CD/WEI ES pg 31), then the executive summaries and conclusions sections should disclose and discuss results from both the BLM's and industry's preferred method (Method 2) and the EPA, FWS, WYDEQ, and the IWAQM's preferred method (Method 2). As the documents currently stand, only Method 4 (the lower impact end of the bracketing) is discussed in the executive summaries and conclusions sections. In addition, we disagree with the statements in the documents that Method 4 is "more refined" and provides "more realistic estimates" of visibility impacts to sensitive wilderness areas. Method 4 uses visibility transmissometer data from one year only (1993), and therefore is not well suited to predict the full range of potential visibility impacts over future visibility conditions during the life of the projects (30 or more years). IWAQM does not advocate use of only one year of baseline visibility data, preferring at least a 5 year average. Because visibility impacts on "dirty days" are less apparent to the human eye, by using only transmissometer data to represent visibility baselines, pollution impacts to visibility may be underestimated if any year or any day in the future is cleaner than those in the 1993 data.

6

The text of the air quality technical support documents also states that both visibility methods impact analyses assumed "background visibility measured at one location is representative of the entire sensitive area" and this "does an conservative assumption" (p 46 AQTSD Vol. II). This is misleading. For example Mt. Zirkel Wilderness visibility is cleaner than Rocky Mountain National Park (RMNP) by 1-2 inverse megameters extinction on a yearly average (a large and significant amount). By using RMNP data to represent Mt. Zirkel wilderness, visibility impacts will be underestimated at Mt. Zirkel. We are especially concerned about potential impacts to Mt. Zirkel visibility, given the recent ozone-related class up of the Hayden power plant emissions. We would be extremely disappointed to see these proposed actions result in backsliding from the progress made in remedying visibility impacts in Mt. Zirkel. We do not believe that potential visibility impacts to Mt Zirkel Wilderness have been adequately disclosed in this document, even when looking at "Method 2" results, because of the rejection by the BLM (for what we believe are non-valid reasons) of the Mt Zirkel visibility background data in favor of the RMNP visibility data.

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9 We also recommend that construction, flaring, and blowdown emissions be included (as well as the production emissions currently shown) in the cumulative air quality analysis. The text of the AQTSD explains that temporary emissions such as those occurring during construction activities may not be used for calculating increment or NAAQS violations, however, we believe it is appropriate to include temporary construction emissions when calculating impact on visibility and sensitive lakes. Temporary emissions can contribute to visibility impairment and exacerbate acidic deposition impacts. These emissions should be modeled cumulatively (with production

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9 emissions and other cumulative sources) so that visibility and acidic deposition impacts can be disclosed to the public.

10 Additionally, we would have liked to have had a more consistent use of stakeholder input and involvement in developing and implementing the air quality impacts analysis. There apparently were several protocol and modeling related decisions made by BLM and Amoco in the year-long period after the 3-15-96 preliminary protocols were released (the final opportunity for stakeholder comment) without stakeholder notification or comment opportunity. If the stakeholder process is to be used successfully, there will need to be better communication and agreement on how visibility impairment will be modeled and assessed, before that modeling begins.

11 Industry has made several requests, in DEIS meetings regarding other oil and gas projects, for the Continental Divide/Wamsutter II Air Quality impact analysis protocols to be considered the "standard" that will be followed for all future oil and gas DEIS preparation. We do not support this proposal, for the reasons listed above. In fact, we believe the development of the air quality section of these DEIS's could have been greatly improved with the input of how the stakeholder process should be applied and how technical data should be utilized. Nevertheless, we are hopeful that changes can be made between draft and final EIS's within the air quality impacts analysis that will enable us to be more confident in the visibility modeling analysis and in use of this information in the future.

12 Our final general comment applicable to all three documents is that Savage Run Wilderness is referred to in all documents as a Class II area, when in fact it is a Wyoming Class I area. All references to Savage Run in the documents should be changed to reflect this.

13 In summary, we request that the BLM remodel visibility impacts to Mt. Zirkel, Rawah, and Savage Run wilderness, using the Mt. Zirkel baseline visibility data (as was originally described in the modeling protocols). We also request that the BLM discloses and discuss the results from Method 2 and Method 4 equally, if Method 4 is to continue to be used by the BLM. We would like to suggest that the stakeholders group be reconvened to discuss the visibility protocols to be used in the reanalysis to ensure that the visibility analysis is done in a manner that is technically supportable.

14

15

Thank you *for the opportunity* to comment on these three documents.

Sincerely,

LYLE LAVERTY
Regional Forester

cc: Forest Supervisor, Arapaho Roosevelt NF
Forest Supervisor, Medicine Bow Routt NF
Forest Supervisor, Bridger Teton NF
Al Pierson, BLM
Bill Yellowtail, EPA
Dennis Hemmer, WYDEQ
Margie Perkins, APCD, CDPHE

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Continental Divide/Wamsutter II DEIS Comments

16 pg vii, paragraph 3, line 7: "potential exists..." Does not mention the results of Method 2 analysis, even though it is stated in the far field analysis (pg 31, paragraph 2) "...the combination of the two approaches (Method 2 and Method 4) provides a reasonable bracketing of the likely impacts on visibility." Why have only the results from the method with the least impact on visibility ("method 4") been selected to display in the public?

17 pg 3-5, paragraph 2: Much of this section is incomplete.
- Did not list NADP sites at Sinks Canyon or South Pass. Were these used in your modeling? If not, why not?
- Did not mention the data collected by the USFS (Deep Lake (Bridger Wilderness) and Saddlebag Lake/Popo Agie Wilderness) which was used in analysis.
- The modeling also used data from the BLM NDDN site at Pinedale, so it should be mentioned here.

18 pg 4-9, col 2, paragraph 2:
The modeling uses Rock Springs surface meteorological data and Lander upper air data. Should there have been use of some surface met. data to represent the part of the CD/Wam project on the eastern side of the continental divide also?

19 pg 4-9, col 2, paragraph 2:
The text states: "The maximum predicted "near field" air pollutant concentrations occur close to and between well locations and would occur so close to each well location that adding additional wells throughout the field would not increase the overall maximum concentrations." Is this reasonable/logical?

20 pg 4-19, paragraph 2: Lists only results from "method 4" analysis for far field visibility, even though the far field analysis states (pg 31) "...the combination of the two approaches (Method 2 and Method 4) provides a reasonable bracketing of the likely impacts on visibility." Why is this?

21 pg 4-20: Inclusion of Pinedale Anticline project in cumulative effects:
The Pinedale Anticline project was speculative when the work on this project was initiated in March of 1995. However, by mid 1996, the Pinedale Anticline project was refined enough so that the potential impacts should have been included in the cumulative effects model. As the modeling protocols were not declared final until late 1996, and the air modeling analysis for this project was not complete until spring of 1999, there would have been adequate time to incorporate the Pinedale Anticline emissions into the cumulative analysis.

22 pages 1-8 The Rawlins Field office will exceed the RMP numbers for wells in this EIS if all of the wells are allowed. Will an amendment to the RMP be required to allow the additional wells prior to signing of a ROD for this document?

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Continental Divide/Wamsutter II South Beggs Air Quality Technical Support Document-Comments
Vol I, Near Field Analysis

23 pg ii, last paragraph: Run on typo "in the st the".

24 page 2: Map is wrong.. It shows South Beggs project area in Colorado. If this map was produced from the model, the modeling may not be accurate. Also fig 2.3, pg 20.

25 page 5 and 6: There are numerous inconsistencies within this section and the South Baggs and CD EISs (see table below)

Operation Phase	Near Field analysis	South Beggs EIS	CD EIS
Rig up/rig down	approx 24 days pg 5 and AS-4	1 day per well TM 2-1	5 days per location TM 2-2
Pipeline construction	15 days per well pg AS-4.1	2 days per well TM 2-1	15 days per well TM 2-4
Construction Resistance Phase	5 days per well pg 5 and AS-2	1 day per well TM 2-1	1 days per location TM 2-3
Flaring	3 days per well, 24 hours per day pg 6. Annual calculation = max 18 days at 24 hours per day pg AS-2.15	4 to 6 days pg 2-35 up to 3 days pg 4-7	well flowed and flared 1-10 days pg 2-32 up to 3 days pg 4-9

26 Since the general public did not receive the Near Field Analysis Doc, it is reasonable to assume that the public is not informed as to the actual impacts that are being modeled for?

27 pg 23, paragraph 2: The development is located 25 miles west (not east) of Rawlins. (might help if Rawlins was shown on fig. 1.1)

28 pg 23, section 4.1: The reasoning used for applying the Baggs data to the South Baggs analysis should apply to a large portion of the CD/WEI project area also. Therefore should use Baggs climatic data for part of the CD/WEI analysis area.

29 pg 26, TM 4.1: Table title is misleading. It implies that this data is monitored from the project area when in fact it is extrapolated from several different sources.

30 pg 29, paragraph 1, last sentence: Were the wells spaced to maximize potential emissions?

31 pg 31: Flaring, construction, and blowdown of wells to increase production should be included in the cumulative impacts analysis for assessing impacts on AQRVs. The exclusion of temporary emissions in determining increment consumption, does not relate to cumulative emissions impacts on visibility and acidic deposition impacts, and these should be addressed in the

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31 document. Blowdown is a continual process for the life of the project, and emissions from this process do not appear to be addressed.

32 pg B1-1, TM B1-1,5: Table description is missing, needs to be labeled better to describe what is in the table.

33 pg C1-3: Why use Beggs wind data here for wind erosion emissions, when Rock Springs data is used for other CD analysis?

34 Appendix E: Copies are of such poor quality that they can not be read!

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Continental Divide/ Wamsutter/South Baggs Air Quality Impact Assessment Technical Support Document Comments
Vol II - Far Field Analysis

General Comment:

35 The way the Far Field analysis was done, combining the Continental Divide/Wamsutter II and South Baggs Natural gas development projects together is one analysis, makes interpretation of the air quality effects of one project vs another impossible to determine. The purpose of this environmental document is to fairly disclose (to the public and the decision maker) the effects of a proposed action on the environment. Since this is proposed as two discrete projects and will result in two decision documents, combining the analysis does not display the effects of each project on the environment. While we appreciate that both projects were combined to show the cumulative impacts of both, the modeling should also address what percent of the air quality impacts were attributable to emissions from each separate proposed action.

36 pg 15: Calmet wind vectors. This graphic needs to be printed at a larger scale to allow people to see the vectors without the use of a hand lens.

37 pg 27, paragraph 1: "Discrete receptors are also placed at lakes identified by the USDA Forest Service and the USGS as the most sensitive to acid deposition." This is not precisely true. Some long-term sample lakes were selected to be the most sensitive, while others simply represent lakes with long-term monitoring sites. It would be more accurate to say "discrete receptors are also placed at lakes identified by the USDA Forest Service and the USGS as long-term sample lakes for assessing impacts from acidic deposition."

38 pg 29 paragraph 3: Forest Service Visibility Analyst Scott Copeland finds the argument on relative humidity (RH) relationships to cloud cover flawed and misleading. The paragraph seems to assert that above 90% relative humidity there are likely to be clouds, therefore all data above 90% RH should be discarded. The presence of clouds does not make visibility more or less sensitive to impairment. In addition, the presence or lack of clouds is irrelevant to the visibility analysis. It is also not true that "optical monitoring devices are not reliable at humidity values above this level" (We invite the BLM to provide evidence of this statement, if they insist on retaining it). If the BLM's argument for RH is that certain values in that area are meteorological conditions and daily urban visibilities should be used, then we contend that actual relative humidities should also be included, and no data rejected on the basis of RH unless it exceeds the IWAQM recommended levels of 98%.

39 pg 31, paragraph 1: This indicates that looking at 1995 data only (method 4) is better than looking at long-term 20% cleanest background data. We disagree. The FS has always used the average of the 20% cleanest as the baseline by which to determine change. Using method 4 is not consistent with FS protocols, IWAQM recommendations, or EPA's regional haze regs. There should be a better discussion of the differences between method 2 and method 4, as well as mention of the initial model runs with methods 1,3, and 5.

40 pg 31, paragraph 2: This states that "...the combination of the two approaches (Method 2 and Method 4) provides a reasonable bracketing of the likely impacts on visibility." However, the EIS discloses the results of Method 4 as the impact. This is not proper considering that Method 2 is consistent with FS protocols for assessing impact in Class I wilderness areas, while Method 4 is not.

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41 pg 46, paragraph 4: These assumptions may not be valid. The Bridger site is located on the west side of the Continental Divide. Wind and atmospheric conditions which would affect the west side would likely be different on the east side. Diurnal differences between east and west side of continental divide will play into this. Also, the assumption of uniform conditions is not likely due to topographic features and layering conditions.

42 pg 48 and 49, Tbl 5-11: The ANC numbers shown and modeled for Deep Lake and Lower Saddleback Lake are incorrect. In our August 13, 1997 letter to Scott Archer, we requested that the BLM use the Forest Service lakes data that we had previously sent to them for Deep and Lower Saddleback and that for the acidic deposition analysis the lowest ANC value listed should be used in the modeling. The values listed instead seem to be average ANC values. We request that the BLM re-model impacts to these two lakes using the numbers 49 ueq/l for Deep Lake ANC and 58.3 ueq/l for Lower Saddleback lake ANC. These ANC number are for the 10% lowest (most sensitive) ANC, which is currently the acceptable FS methodology for assessing impact in lakes where sufficient monitoring data exists.

43 Table 5-11: For acidic deposition impacts to lakes, only the intermediate values are shown and not the equations with which they are derived. Please include these equations, so that the whole process is transparent.

44 Apendix C, Forest Service Visibility Analyst Scott Copeland has reviewed the letter from Scott Archer to Jon Steer regarding the rejection of the Mt. Zirkel visibility data for use in projecting future visibility impacts to Mt. Zirkel wilderness. Scott Copeland conducted a thorough review of the Mt. Zirkel sephelometer data to determine the validity of the assertions in the letter. Scott Copeland determined that there is no valid reason to discard the Mt. Zirkel data; in fact data analysis shows that the Mt Zirkel data has the same distribution, outliers and verifability as the RMNP data. Analysis indicates that the Mt. Zirkel data is "stable, normal, and typical". In fact the only real difference between the data of Mt. Zirkel and RMNP, is that Mt. Zirkel data shows cleaner visibility. In addition, data from the Mt. Zirkel site indicates measured relative humidity (RH) is higher. Both the higher RH and the cleaner Mt. Zirkel visibility indicate that by terminately using RMNP data to represent Mt. Zirkel, the future visibility impact at Mt. Zirkel from the proposed actions may be greatly underestimated. Remodeling using the correct background data should be done between the DEIS and FEIS.

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South Baggs DEIS
Comments

General Comment: The proposed action in this EIS (50 wells, pg S-3) does not agree with the proposed action presented in the Far Field analysis (90 wells, pg 4) or the Near Field analysis (90 wells, pg 1). This needs to be made consistent or clarified. There appears to be confusion between the proposed alternative and the maximum development proposal.

pg 2-11, Tbl 2-1: Estimates of times is not consistent with what is used in the far field analysis. There are numerous inconsistencies within this section and the South Baggs and CD EISs.

Operation Phase	Near Field analysis	South Baggs EIS	CD EIS
Rig up/Rig down	approx 24 days	1 day per well	5 days per location
	per 5 well AS-6	Tbl 3-3	Tbl 3-3
Pipeline construction	12 days per well	3 days per well	12 days per well
	per AS-4-1	Tbl 3-3	Tbl 3-4
Construction limitations	6 days per well	1 day per well	5 days per location
Pg 2-10	per 5 well AS-5	Tbl 3-3	Tbl 3-3
Flaring	3 days per well, 24 hours per day	4 to 6 at 24 hr pg 2-19	well flowed and flared 1-15 days
	pg 6.	pg 3-53	pg 3-53
	Actual calculation = max 15 days at 24 hours per day	up to 3 days pg 4-7	up to 3 days pg 4-8
	pg A-2-12		

45 pg 2-17, Tbl 2-2: The table and document does not include emissions from commuting recruitment shown for pipeline construction.

pg 2-41, Tbl 2-4: Air Quality, Range Resources, Water Resources, Fisheries, vegetation & Wetlands, Wildlife and Cultural all have "NSI w/ mitigation"...even for the no action alternative. It is not clear what mitigation is proposed in this table for air quality impacts. Also, if displayed in this manner, you should quantify or at least rate the intensity or amount of mitigation required for each of the alternatives so they can be assessed on their own merits.

pg 3-14, paragraph 4: Ucnic Teriorthenus is listed twice.

pg 3-74, Tbl 3-24: Is this the most recent data available? Most recent data is 5 years old, and a lot of changes have happened in that time. This comment applies to most/all of the socioeconomic section.

pg 4-5, 4.2.1, introduction: This section is missing.

pg 4-7, 4.2.2.2: Can these impacts be quantified? At the least it would be helpful if there were relative ranking of air quality impacts by alternative, so that decision maker has an idea of the degree of relative impact.

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pg 4-7, 4.2.3.5, paragraph 5, first sentence: Is this physically possible or reasonable to assume that an increase in soils could occur without an increase in cumulative emissions?

pg 4-7, 4.2.3.2, paragraph 4: " Natural gas would be burned (flared) for up to 3 days." Why was the near field analysis (pg A-2-12) done with flaring being done for 15 days?

pg 4-11, 4.2.3.4: Quantify effects/impacts. How does it relate to the other alternatives?

pg 4-12, paragraph 2: Pinedale Anticline project should have been included in this analysis. True, it was not fully described when your project was initiated, however, by the time the air quality analysis protocols were finalized it was defined in the point it could/should have been included. At that time it was no more speculative than the Continental Divide/Wamsutter II proposed operation.

45 pg 4-12, last paragraph: What were the individual effects of this project or the Bridger and Fitzpatrick wilderness' from this project alone? You did not specify this was the result of the Method 4 analysis alone, not mentioning the Forest Service recommended method (Method 2), even though the for field analysts for visibility exists (pg 31, paragraph 2) that "...the combination of the two approaches (Method 2 and Method 4) provides a reasonable bracketing of the likely impacts on visibility." Why did you choose to show only the results of the least impactive method??

pg 6-2: Coordination and Coordination. This list does not include the USFS, EPA or NPS. These agencies were involved in the Air Quality Impact Assessment TSD, but we assume that since they were not listed here there was no coordination with other federal agencies on the DEIS? If soo, was the data used and assumptions made current and reasonable?

Table D2
Data for Rawah is missing.

7.2.79.2 Letter 79 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

Comment Response 1 - The BLM recognizes that the U.S. Congress established the National Wilderness Preservation System (Public Law [P.L.] 88-577, dated September 3, 1964) and specific Wilderness Areas (numerous subsequent laws, including P.L. 94-567, P.L. 95-237, and P.L. 98-550) and directed the appropriate federal land management agency to administer those lands "for the use and enjoyment of the American people in such a manner as will leave them unimpaired for future use and enjoyment as wilderness, and so as to provide for the protection of these areas, the preservation of their wilderness character, and for the gathering and dissemination of information regarding their use and enjoyment as wilderness."

The BLM also recognizes that the U.S. Congress established procedures for the Prevention of Significant Deterioration of Air Quality (P.L. 95-95, dated August 7, 1977) "to preserve, protect, and enhance the air quality in national parks, national wilderness areas, national monuments, national seashores, and other areas of special national or regional natural, recreational, scenic, or historic value" and "to insure that economic growth will occur in a manner consistent with the preservation of existing clean air resources." Further, the U.S. Congress gave specific federal land management agencies "an affirmative responsibility to protect the air quality related values (including visibility) of any such lands within a class I area and to consider, in consultation with the Administrator, whether a proposed major emitting facility will have an adverse impact on such values" under the Preconstruction Requirements (New Source Review) of the *Clean Air Act*.

However, the U.S. Congress did not require that all Wilderness Areas either have, or achieve, pristine air quality conditions, nor did the U.S. Congress grant any federal land management agency air quality regulatory authority. In fact, ever since the original *Clean Air Act* was passed (P.L. 159, dated July 14, 1955), it has been the declared policy of the U.S. Congress "to preserve and protect the primary responsibilities of the States [Tribal] and local governments in controlling air pollution."

In 1977, after considerable debate, the U.S. Congress did amend the *Clean Air Act* (P.L. 95-95, dated August 7, 1977) to address air quality on certain federal lands by: 1) establishing 158 mandatory federal PSD Class I areas where additional air pollutant levels above existing concentrations would be limited for specific pollutants (PSD Class I increments); 2) providing for federal land management agency review and comment on major air pollutant emission source permit applications (Major Stationary Source - New Source Review); and 3) establishing the National Visibility Goal of "the prevention of any future, and the remedying of any existing, impairment of visibility in mandatory class I Federal areas which impairment results from manmade air pollution" (*Clean Air Act* Section 169A(a)1).

By establishing the PSD Class I increments for NO_2, particulate matter, and SO_2, the total concentration of these pollutants due to all non-temporary anthropogenic emission sources is restricted to a small level above legally defined baseline conditions. The U.S. Congress specified 158 areas as mandatory federal PSD Class I areas and provided a mechanism by which each applicable air quality regulatory agency could establish additional federal PSD Class I areas. However, the only Class I redesignations since 1977 have been completed by four specific tribal governments. In addition, EPA regulations specified that baseline conditions be legally defined only after a "major stationary source" permit was submitted, often many years after 1977. Of the nearly 625 current Wilderness Areas (Landres and Meyer 1998), only 120 are federal mandatory PSD Class I areas. Therefore, over 500 Wilderness Areas have no special air quality regulatory status.

By providing for federal land management agency participation in the New Source Review process, federal PSD Class I area managers can exercise their "affirmative responsibility" to protect the AQRVs (including visibility) within their PSD Class I areas through review and comment on major air pollutant emission source permit applications, indicating to the air quality regulatory agency whether a specific proposed facility will have an adverse impact on such values. However, these reviews are limited to only those new emission sources (or modifications) which would result in either a 250-tpy increase for all stationary source types, or a 100-tpy increase for Congressionally specified stationary source types. In addition, although the federal land management agency's participation is legally mandated, the air quality regulatory agency's response is not. Therefore, although the

federal land management agencies have an "affirmative responsibility," they do not have "affirmative authority" to protect the AQRVs (including visibility) on any lands they administer.

The Congressional goal to prevent and eliminate all anthropogenic visibility impairment within 158 federal mandatory PSD Class I areas is very clear. However, the U.S. Congress did not specify when the goal was to be reached, at what level visibility impacts could be considered natural (non-anthropogenic), nor even at what level air pollutants cause visibility impairment (a "just noticeable change"). Since the EPA visibility regulations allowed federal land management agencies to identify areas where visibility is not an important value, the USFS identified two mandatory PSD Class I areas where the national visibility goal is no longer applicable. In addition, until very recently (Final Regional Haze Regulations, 40 C.F.R. 51.300 *et seq.*; 64 *Federal Register* 126, July 1, 1999), the EPA regulations focused on "reasonably attributable" visibility impairment within the 156 federal mandatory PSD Class I areas where visibility is an important value from existing stationary sources. This process was established to require installation of Best Available Retrofit Technology to reduce, but not necessarily eliminate, anthropogenic visibility impairment. It will take time to see how effective the new Regional Haze Regulations are in achieving the national visibility goal.

In summary, the BLM recognizes and understands the USFS's responsibilities for the management and protection of wilderness, including the "affirmative responsibility" to protect AQRVs (including visibility) in the mandatory federal PSD Class I areas that it manages from adverse air pollution effects. The BLM also recognizes and understands the USFS's limited authority to meet these responsibilities.

Comment Response 2 - The visibility impact screening analysis results were not "downplayed in the text, and not even mentioned in the executive summaries of both EIS's" nor was "the visibility methodology showing the least impairment ... selected as the impact to be discussed in the executive summaries of both EIS's and the conclusions section in the Air Quality Technical Support Document."

As fully described in FEIS Section 7.2.93.2, Comment Response 2, a conservative visibility screening level analysis did not preclude that proposed project operations might result in perceptible impacts, so a more refined potential visibility impact analysis was performed. In addition, this refined analysis compared potential impacts to both the 1.0 deciview "just noticeable change" and the USFS's preferred 0.5 deciview "½ just noticeable change." As directed under NEPA (40 C.F.R. 1502.12), the Executive Summary "adequately and accurately" summarized "the major conclusions, areas of controversy (including issues raised by agencies and the public), and the issues to be resolved (including the choice among alternatives)."

Finally, the Federal Land Managers' Air Quality Related Values Workgroup (FLAG) has revised their recommended visibility impact technical analysis procedure as described in the "Draft Phase I Report" dated May 4, 1999 (National Park Service 1999). Although this is an internal review document, FLAG anticipates circulating its preliminary final version for public review and comment through a NOA to be published in the *Federal Register* in the winter of 1999-2000. FLAG has developed analytical procedures in order to evaluate potential air pollution effects on AQRVs (specifically visibility, vegetation/ozone, and soils and surface waters/atmospheric deposition), as required under the PSD procedures of the *Clean Air Act* (New Source Review).

Although not required by NEPA, the BLM chose to analyze and report potential visibility impacts from the Proposed Action and alternatives using the FLAG Draft Phase I Report procedures for disclosure to the general public and the decisionmaker (Table 7.6). Since the FLAG procedures are limited to mandatory federal PSD Class I areas, FLAG values for the Bridger Wilderness Area were applied for the Popo Agie Wilderness Area and the Wind River Roadless Area. Additionally, FLAG values for the Mount Zirkel Wilderness Area were applied for Dinosaur National Monument and the Savage Run Wilderness Area.

For potential visibility impacts predicted to be at or above a "½ just noticeable change" of 0.5 deciview for any day, the FLAG Draft Phase I Report states "The FLM (federal land management agency) would take into account magnitude, frequency, duration, and other factors in making an adverse impact determination" as required under the PSD procedures of the *Clean Air Act* (New Source Review). Given the results of the conservative visibility screening level analysis (method 2) reported in the DEIS (Section 4.1.1.6, Cumulative Impacts) and the FLAG Draft Phase I Report analysis above, the potential for significant adverse impacts was based on the more refined visibility impact analysis (method 4).

Comment Response 3 - Since there are no air quality regulatory limits or standards defining a significant adverse visibility impact level, the BLM followed NEPA direction by including: "(1) a statement that such information is incomplete or unavailable; (2) a statement of the relevance of the incomplete or unavailable information to evaluating reasonably foreseeable significant adverse impacts on the human environment; (3) a summary of existing credible scientific evidence which is relevant to evaluating the reasonably foreseeable significant adverse impacts on the human environment, and (4) the BLM's evaluation of such impacts based upon theoretical approaches or research methods generally accepted in the scientific community" (40 C.F.R. 1502.22(b)).

As clearly described in the DEIS (Section 4.1.1.6, Cumulative Impacts), "A 1.0 deciview change is considered potentially significant as adopted by the Grand Canyon Visibility Transport Commission and reported in Pitchford and Malm (1994). A 1.0 deciview change is defined as about a 10% change in the extinction coefficient, which is a small but perceptible scenic change under many circumstances. The 1.0 deciview value corresponds to a 2 to 5% change in contrast, for a 'black target' against a clear sky, at the most optically sensitive distance from an observer. Factors such as the magnitude of deciview change, frequency, time of the year, and the meteorological conditions during times when deciview thresholds are above 1.0 (as well as inherent conservatism in the modeling analyses) should all be considered when determining the significance of potential impacts."

Table 7.6 FLAG "Draft Phase I Report" Predicted Visibility Impacts in PSD Class I and II Sensitive Areas, Continental Divide/Wamsutter II Natural Gas Project, Sweetwater and Carbon Counties, Wyoming, 1999. [1]

Location	Direct Project Sources [2]	No Action Sources	Total Cumulative Sources
Federal PSD Class I Sensitive Receptors			
Bridger Wilderness	0	4	5
Fitzpatrick Wilderness	0	0	0
Mount Zirkel Wilderness	0	2	2
Rawah Wilderness	0	4	5
Federal PSD Class II Sensitive Receptors			
Dinosaur National Monument	0	0	2
Popo Agie Wilderness	0	3	5
Wind River Roadless Area	0	2	2
Federal PSD Class II/Wyoming PSD Class I Sensitive Receptor			
Savage Run Wilderness	0	3	4

[1] Number of days at or above a "¾ just noticeable change" of 0.5 deciview.
[2] Direct project sources include the Continental Divide/Wamsutter II and South Baggs Proposed Action activities.

Since the DEIS was published, EPA issued their Final Regional Haze Regulations (40 C.F.R. 51.300 *et seq.*, 64 *Federal Register* 126, July 1, 1999) which also considered various visibility impact measures. As stated by EPA "The final rule maintains the deciview as the principle visibility metric used in establishing reasonable progress goals, in defining baseline, current, and natural conditions, and in tracking changes in visibility conditions over time. States may choose to express visibility changes in terms of other metrics, such as visual range or light extinction, as well as in terms of deciview."

EPA reached this conclusion because the deciview "metric expresses uniform changes in haziness in terms of common increments across the entire range of visibility conditions, from pristine to extremely hazy conditions" and "a one deciview change in haziness is a small but noticeable change in haziness under most circumstances when viewing scenes in Class I areas." The Final Regional Haze regulations further state: "The EPA believes the deciview metric has been adequately reviewed for use in the regional haze program. The deciview concept was introduced in 1994 in an article appearing in the peer-reviewed journal Atmospheric Environment. It was presented in the 1996 Criteria Document for the PM NAAQS as a valid metric for characterizing visibility impairment. The EPA also recognized the deciview as an appropriate metric for regulatory purposes in Chapter 8 of the 1996 Staff Paper for the PM NAAQS review. Both of these documents were reviewed and accepted by the Clean Air Scientific Advisory Committee. Visibility conditions at Class I areas have been characterized in terms of deciview in summary reports on the IMPROVE visibility monitoring network." The EPA also supported use of the deciview metric because it satisfies the National Academy of Science (NAS) Committee on Haze in National Parks and Wilderness Areas for "development of an index that takes into account both measurement of physical changes (i.e., changes in air quality) with elements of human perception." Further, the Congressional Research Service found "that the deciview index 'conforms closely' to the NAS recommendation cited above."

When questioned whether a 1.0 deciview change is "the threshold of perception [a "just noticeable change"] in all cases for all scenes," EPA agreed "that a one deciview change should not be considered the threshold of perception in all cases for all scenes. The EPA believes that visibility changes of less than one deciview are likely to be perceptible in some cases, especially where the scene being viewed is highly sensitive to small amounts of pollution. The EPA also acknowledges the technical point made by some commenters that for other types of scenes with other site-specific conditions, [Footnote 70: For example, where the sight path to a scenic feature is less than the maximum visual range] a change of more than 1 deciview might be required in order for the change to be perceptible. However, EPA wishes to emphasize that the overall goal of the regional haze program is not to track changes in visibility for only certain vistas at a specific Class I area. Rather, the program is designed to track changes in regional visibility for the range of possible views of sky and terrain found in any Class I area, and to assure progress toward the national goal. For this purpose, EPA supports the use of the deciview metric as calculated from ambient monitoring data for tracking changes in regional visibility." EPA concluded "Thus, although a 1 deciview change may not be the threshold of perception in all situations, the fundamental advantage of using the deciview remains: the deciview metric expresses uniform changes in haziness in terms of common increments across the

entire range of visibility conditions, from pristine to extremely hazy conditions."

Again, since there is no applicable regulatory visibility standard or threshold, the BLM evaluated potential visibility impacts "based upon theoretical approaches or research methods generally accepted in the scientific community." The DEIS compared the potential visibility impact analysis results to both the 1.0 deciview "just noticeable change" significance threshold level and the USFS "½ of a just noticeable change" 0.5 deciview Limit of Acceptable Change. Certainly any organization may select any other significance level for their own purposes, and the BLM agrees that selecting a visibility threshold of significance less that 1.0 deciview would be more restrictive, but not generally perceptible.

Finally, when the BLM presented its basis for using 1.0 deciview "just noticeable change" as a visibility impact significance threshold at the EPA Region 8 federal Leadership Forum meeting (Boettcher Mansion Conference Center, Golden, Colorado, June 24, 1999), USFS staff indicated the developers of the deciview metric (Pitchford and Malm) were dismayed that their publication was being quoted selectively and otherwise misrepresented. The BLM has contacted both authors requesting written clarification indicating which parts of their publication should either be deleted, revised, or supplemented with new information. The BLM has not yet received a written response from the authors.

Comment Response 4 - As clearly stated in the DEIS (Executive Summary, page vi) "BLM-approved activities must comply with all applicable local, state, tribal, and federal air quality laws, statues, regulations, standards, and implementation plans" and on DEIS page 4-20 "there is no applicable state or federal regulatory visibility standard."

The *Clean Air Act* does require federal land management agencies to exercise their "affirmative responsibility" to protect the AQRVs (including visibility) within mandatory federal PSD Class I areas, indicating to the appropriate air quality regulatory agency whether a specific proposed facility would have an adverse impact on such values (through federal land manager participation in the New Source Review process). For the limited purposes of the PSD Permit review, it is appropriate for the federal land management agency to select any significance threshold (or Limit of Acceptable Change) necessary to meet their policy requirements. Since a Limit of Acceptable Change is neither a regulatory limit nor regulatory standard, it's exceedance alone would not violate any local, state, tribal, and federal air quality regulatory requirement.

Where there is no applicable regulatory visibility standard or threshold, NEPA directs the preparing agency to determine and disclose an appropriate impact significance threshold using "existing [relevant] credible scientific evidence" based on "theoretical approaches or research methods generally accepted in the scientific community." The DEIS compared potential visibility impact analysis results to both the 1.0 deciview "just noticeable change" significance threshold level (based on best science) and the USFS "½ of a just noticeable change" 0.5 deciview Limit of Acceptable Change (based on their own policy).

Although the USFS has no authority to require any agency to use its policy based Limit of Acceptable Change for any purpose, the BLM chose to analyze and report potential visibility impacts using the USFS values for disclosure purposes only. Certainly any organization may select any other significance level for their own purposes, and the BLM agrees that selecting a visibility threshold of significance less that 1.0 deciview would be more restrictive, but not generally perceptible. Please also see Comment Responses 1 and 3, above and Section 7.2.91.2, Comment Response 32, in this FEIS.

Comment Response 5 - Please see Comment Responses 2, above and 40, below and FEIS Section 7.2.84.2, Comment Response 32.

Comment Response 6 - As clearly described in the Air Quality Impact Assessment Technical Support Document text (Volume II - 4.4. Dispersion Modeling Options):

> "The refined analysis (method 4) used hourly direct IMPROVE transmissometer optical extinction measurements for defining the actual visibility conditions observed throughout 1995. Therefore, the meteorological conditions which occurred in defining the actual background are the same as those applied in the modeling analysis. The IMPROVE transmissometer values measured at the Bridger Wilderness Area were assumed to be representative of the Wind River Roadless Area, and the Bridger, Fitzpatrick, and Popo Agie Wilderness Areas. The IMPROVE transmissometer values measured at Rocky Mountain National Park were assumed to be representative of Dinosaur National Monument, and the Mount Zirkel, Rawah, and Savage Run Wilderness Areas.
>
> In CALPOST method 4, hourly transmissometer measurements are averaged to compute 24-hour average background extinction values for each day in 1995. The main advantage of this technique is that correlations between meteorological conditions, actual visibility conditions, and potential source impacts can be evaluated in the delta deciview calculation rather than using the conservative long-term mean of the 20% cleanest seasonal visibility background data alone. For this reason, method 4 is considered the "refined" technique. Because method 4 compares potential visibility impacts to the entire range (from the 1% level to the 100% level) of actual measured background visibility conditions, it may, in fact, produce larger peak visibility impacts than method 2 which only uses the 90% level. Since the method 2 screening approach assumes the 20% cleanest visibility conditions would occur every day of the year, the peak impact would be less, but the number of days predicted to have perceptible impacts would be greater. method 4 is simply designed to use more detailed information on the actual background visibility

> conditions measured during 1995 when potential source impacts on visibility are predicted in the sensitive areas."

Because the very conservative, but much simpler, visibility screening analysis (method 2) assumes the 20th percentile cleanest seasonal IMPROVE fine particulate matter concentrations would occur on every day of the year, the visibility screening analysis (method 2) simply cannot provide "more realistic estimates" of visibility impacts than the more refined visibility impact analysis (method 4) based on direct hourly optical measurements.

In addition, IWAQM (EPA 1998) does not specify the period of "baseline visibility data," nor does IWAQM indicate a preference for "at least a 5 year average." IWAQM does state "As noted previously, visibility analyses are compared against a background condition. The estimates of background visibility conditions at Class I areas are derived from the IMPROVE (Interagency Monitoring of PROtected Visual Environments) network. There are several methods of obtaining estimates of the background visibility. These include reconstructed extinction from speciated measurements of particulate matter, direct measurement of extinction with a transmissometer, and estimates of extinction from photographs."

The statement that "visibility impacts on 'dirty days' are less apparent to the human eye" is also incorrect. As stated in the IWAQM document, the deciview visibility "index was specifically designed so that anywhere along its scale, haziness changes that are equally perceptible correspond to the same deciview difference. For example, a 3 dv [deciview] difference caused by a change in air quality should result in about the same perceived change in haziness, whether under clean or highly polluted conditions."

However, adding equal air pollutant amounts into either clean or polluted background conditions will certainly have different visual impacts, and if future background optical conditions are more clear than those measured in 1995, greater potential visibility impacts would be predicted. Similarly, if future background optical conditions are less clear than those measured in 1995, fewer potential visibility impacts would be predicted.

Finally, as clearly described in the Air Quality Impact Assessment Technical Support Document text (Volume II - Appendix C - Analysis of Visibility Data in SW Wyoming and NW Colorado) "In order to assist in determining the 'representativeness' of 1995 optical data, Mr. Neth also prepared graphical displays of seasonal and annual 10-50-90 percentile Standard Visual Range bar charts for the Bridger and Rocky Mountain optical data period of record (Fall 1988 through Summer 1997). As would be expected, both monitoring locations showed an annual cycle with the highest (most clear) conditions occurring in Winter, and the lowest (most obscured) conditions occurring in Summer/Fall. In general, the 1995 data year was well within extreme values measured in other years (it was neither the 'most clear' or 'most obscured' data year), although the range of difference between the 10th and 90th percentile values was less than most other data years."

Comment Response 7 - As clearly described in the Air Quality Impact Assessment Technical Support Document text (Volume II - 5.2 Visibility Impacts):

> "It is also important to remember that both the screening (method 2) and refined (method 4) visibility impact analyses assumed: 1) reconstructed or measured background conditions measured at one location were representative of the entire sensitive area (as well as other sensitive areas); 2) the maximum modeled 24-hour primary and secondary particulate matter concentration at one location was representative of the entire sensitive area; and 3) these predicted conditions would occur uniformly throughout the calculated view distance (i.e., 250 km). These are conservative assumptions."

The BLM regrets any confusion it caused by referring to the assumption "reconstructed or measured background conditions measured at one location were representative of the entire sensitive area (as well as other sensitive areas)" as conservative. This assumption neither overestimates nor underestimates potential impacts.

However, assuming the maximum primary and secondary particulate matter concentrations predicted at any single location within the sensitive area would occur evenly throughout the entire sensitive area, as well as in all directions throughout the entire visual range (up to hundreds of kilometers), are very conservative assumptions. The Revised Air Quality Impact Assessment Technical Support Document text (Volume II - 5.2 Visibility Impacts) has been revised to clarify that the last two assumptions are very conservative. Please also see Comment Response 44 below.

Comment Response 8 - Please see Comment Response 44 below.

Comment Response 9 - Please see FEIS Section 7.2.84.2, Comment Response 29.

Comment Response 10 - As described in FEIS Section 7.2.84.2, Comment Response 34, the BLM chose to use an advisory stakeholder process to prepare a protocol describing the methodology the BLM intended to use prior to conducting the air quality impact assessment.

The advisory stakeholder team included representatives of: the Operators (Amoco Oil Company, Merit Energy Company, Union Pacific Resources Company, Yates Petroleum, Snyder Oil Corporation, and others); the analysis contractors (TRC Mariah Associates, Inc., Earth Tech, Inc., and Gary Holsan Environmental Planning); the state air quality regulatory agencies (Wyoming Department of Environmental Quality-Air Quality Division and Colorado Department of Public Health and Environment-Air Pollution Control Division); the federal agencies (EPA, USFS, BLM, and National Park Service); a tribal agency (the Wind River Environmental Quality Commission); and an environmental organization (the Wyoming Outdoor Council).

Prior to and during advisory stakeholder meetings, the BLM emphasized that the team's purpose was to enhance cooperation before the BLM conducted its air quality impact assessment, rather than to simply risk receiving adversarial comments on the DEIS. The BLM also expressed a desire to obtain consensus, but insisted that where consensus was not possible the BLM was solely responsible for conducting the assessment. Apparently, some stakeholder participants either misunderstood or chose to ignore the advisory nature of the team. This may be because in most cases consensus was reached and the BLM conducted the air quality impact assessment as discussed by the advisory stakeholders.

Three formal advisory stakeholder team meetings were held, and formal stakeholder comments were solicited until April 10, 1998. In addition, the BLM also communicated with individual stakeholder team members as needed prior to issuing the Final Air Quality Impact Assessment Protocol on September 28, 1998 (BLM 1998e). All "protocol and modeling related decisions" were made by the BLM, and not by any other stakeholder (including Amoco Oil Company).

Finally, as clearly stated in the Final Protocol (Page 1) "The purpose of this protocol is to ensure that the approach, input data, computational methods, etc., are acceptable to BLM, and that interested parties have had the opportunity to review and provide input, before the study is initiated." In a few instances, based on unforeseen circumstances after the Final Protocol was issued, the BLM modified the air quality impact assessment procedures. These changes are described in the Revised Air Quality Impact Assessment Technical Support Document (BLM 1999d) and were discussed at a preliminary results presentation for the BLM's Wyoming State Director (held February 16, 1999). The entire advisory stakeholder team was invited to attend that presentation and to present any comments at that time. Although not required by NEPA, using an advisory stakeholder process to assist the BLM in implementing it's authority and responsibility to conduct air quality impact assessments is consistent with existing NEPA regulations.

Comment Response 11 - As required by NEPA, the BLM addresses each of its potential management decisions separately depending on the specific Proposed Action. Although there is no "standard" air quality impact analysis methodology, the BLM follows the federal NEPA regulations faithfully. Regarding individual Proposed Actions and alternatives, the methods used to evaluate potential air quality impacts are determined on a case-by-case basis. This is consistent with NEPA direction to discuss impacts "in proportion to their significance" (40 C.F.R. 1502.2(b)) and to apply analysis methods that are generally accepted in the scientific community (40 C.F.R. 1502.24). It is logical that the BLM may use much of the same data and many of the same methods as state, tribal, or local air quality regulatory agencies (which must be standard by law); however, NEPA specifies only the systematic approach (depending on the scope, potential significance, etc.) and not standard air quality impact assessment methods to adequately disclose potential air quality impacts from a Proposed Action and alternatives before such activities are authorized.

Comment Response 12 - The BLM regrets any confusion it caused by referring to the Savage Run Wilderness Area as a PSD Class II area.

Under the federal *Clean Air Act* (42 U.S.C. 7472), all international parks, national Wilderness Areas, national memorial parks over 5,000 acres, and national parks over 6,000 acres in existence on August 7, 1977, were designated as mandatory federal PSD Class I areas. All other areas classified as either "attainment" or "unclassified" pursuant to the National Ambient Air Quality Standards were designated as PSD Class II areas. A formal process for redesignation of PSD Class II areas to either Class I or Class III was also defined (42 U.S.C. 7474). The federal visibility protection goal and requirements (42 U.S.C. 7491 and 7492) are applicable only within mandatory federal PSD Class I areas. In addition, mandatory federal PSD Class I areas may not be redesignated, although the spatial extent may vary if the original area's boundary is modified (i.e., Wilderness Area boundary expansions, etc.)

Under the State of Wyoming Air Quality Standards and Regulations (Section 24(c) Prevention of Significant Deterioration), all national parks, national Wilderness Areas, and national memorial parks in Wyoming (regardless of size) as of January 25, 1979, were designated Class I and may not be redesignated. Among other preconstruction permit application requirements, the State of Wyoming requires that an analysis be conducted of potential impairment to visibility, soils and vegetation having significant commercial or recreational value, and other associated growth that would occur.

Since the Savage Run Wilderness Area was established under the *Endangered American Wilderness Act of 1978* (P.L. 95-237, February 24, 1978) and has not been redesignated as prescribed in the federal *Clean Air Act* (42 U.S.C. 7474), it is a federal PSD Class II area and a State of Wyoming Class I area. Similarly, since the Cloud Peak, Encampment River, Gros Ventre, Huston Park, Jedediah Smith, Platte River, Popo Agie, and Winegar Hole Wilderness Areas were established under the *Wyoming Wilderness Act of 1984* (P.L. 98-550, October 30, 1984), they are all federal and State of Wyoming PSD Class II areas.

As clearly stated in the DEIS (Executive Summary, page vi) "BLM approved activities must comply with all applicable local, state, tribal, and federal air quality laws, statues, regulations, standards, and implementation plans." Therefore, BLM-approved activities are required to conduct an analysis of potential visibility impairment within the Savage Run Wilderness Area under State of Wyoming regulations, even though the National Visibility Goal and Regulations are not applicable. In addition, potential air quality impacts within the Savage Run Wilderness Area would be limited by applicable federal PSD Class II increments and State of Wyoming PSD Class I increments.

Both the FEIS text (Section 3.1.2, Air Quality; Map 3.1; Section 4.1.1.6, Cumulative Impacts; Table 4.4; and Table 4.6) and the Revised Air Quality Impact Assessment Technical Support Document text (Executive Summary - pages ii and iii,

Volume I - 1.0 Introduction, Volume II - 1.0 Introduction, Figure 1-1, and Table 5-3) have been revised to clarify the status of the Savage Run Wilderness Area as recommended.

Comment Response 13 - Please see Comment Response 44 below.

Comment Response 14 - Please see FEIS Section 7.2.84.2, Comment Response 32, and Section 7.2.93.2, Comment Response 2.

Comment Response 15 - As described in Comment Response 10, above, the BLM chose to use an advisory stakeholder process to prepare a protocol describing the methodology the BLM intended to use prior to conducting the air quality impact assessment. That formal process was completed when the Final Protocol was issued on September 28, 1998. The visibility analysis was done in a "technically supportable" manner, and no re-analysis is necessary. Please also see Comment Responses 1, 3, 4, and 6, above; Comment Response 38, below; FEIS Section 7.2.84.2, Comment Response 32; and FEIS Section 7.2.93.2, Comment Response 2.

Comment Response 16 - Please see Comment Response 2, above and 40, below and FEIS Section 7.2.84.2, Comment Response 32.

Comment Response 17 - NADP sites in Sinks Canyon or South Pass were not included in the Final Air Quality Impact Assessment Protocol, nor were they used in the deposition modeling analysis. The Acid Neutralizing Capacity (ANC) and pH of the sensitive lakes (Deep Lake and Saddlebag Lake) were supplied by the USFS and were used in the deposition modeling. The Pinedale NDDN site hourly ozone data and hourly meteorological data (wind speed, wind direction, temperature, relative humidity) were used in the CALPUFF and CALMET modeling, respectively.

Comment Response 18 - The Rock Springs surface and Lander upper air meteorological data are the most complete data sets available (with at least 1 year of hourly measurements) and are representative of the meteorological conditions within the CD/WIIPA. The Continental Divide (along the southern boundary of the Great Divide Basin) roughly divides the CD/WIIPA in half along I-80; however, there are no terrain features along this region of the continental divide that would significantly affect the meteorology.

Comment Response 19 - Near-field dispersion modeling was performed for a patch of eight producing wells surrounding the proposed compressor station/gas processing plant operating at full capacity. Spacing between wells and to the centralized compression/gas processing facility was the minimum well spacing defined in the Proposed Action. Maximum modeled concentrations from well emissions alone were found to occur at receptors closest to the well. Maximum modeled concentrations from the compression/gas processing facility were found to occur several hundred meters away from the facility but within the representative production area. Considering the "reasonable, but conservative" source layout and emissions used, and the localized nature of maximum modeled concentrations, it is reasonable to state that adding additional wells beyond the modeled well patch would not significantly increase the overall maximum concentration.

Comment Response 20 - Please see Comment Response 2, above and 40, below and FEIS Section 7.2.84.2, Comment Response 32.

Comment Response 21 - As clearly described in the DEIS (Section 4.1.1.6 Cumulative Impacts) "The Pinedale Anticline project proposal was specifically not included in the cumulative air quality impact analysis as a 'reasonably foreseeable' development because of its unsettled, speculative status at the time the cumulative analysis was initiated. What may actually be authorized for development is unknown. No WDEQ-AQD air pollutant emission permits have been issued for the proposed Pinedale Anticline activities. Thus, to include the proposed project would mislead the public and the BLM decisionmaker with insupportable estimates of cumulative effects on the resources, ecosystems, or human communities. The BLM is developing the Pinedale Anticline air quality impact assessment protocol through its 'stakeholder' process, and it is clear the Pinedale Anticline cumulative air quality impact assessment will consider the Continental Divide/Wamsutter II and South Baggs projects, (as well as other 'reasonably foreseeable,' authorized, or permitted actions)."

Although the Pinedale Anticline protocol has since been prepared (BLM 1999c), the air quality impact analysis was not completed, nor was the DEIS published when the CD/WIIPA air quality impact analysis was completed. Therefore, the anticipated Pinedale Anticline project was not a "reasonably foreseeable" development for inclusion in this FEIS, although this project is a "reasonably foreseeable" development for inclusion in the Pinedale Anticline DEIS.

Comment Response 22 - As described on DEIS page 1-9, the BLM will not authorize oil an gas development actions (APDs, ROWs) that exceed current RMP-identified reasonably foreseeable disturbance estimates prior to completing a RMP review and possible amendment. However, the ROD for this EIS will likely allow for some level of oil and gas development on GDRA lands (e.g., ≤1,655 wells) pending completion of an RMP review and possible amendment.

Comment Response 23 - The Revised Air Quality Impact Assessment Technical Support Document text (Volume I - Executive Summary) has been corrected.

Comment Response 24 - The Revised Air Quality Impact Assessment Technical Support Document text (Volume I - Figures 1.1 and 2.3) has been revised to indicate the correct location of the South Baggs project area. However, these figures were not used to determine modeled source locations in the analysis, but only to show the approximate locations of general features within the cumulative impact analysis area. Modeled sources and receptors were located using Universal Transverse Mercator (UTM) coordinates determined from USGS and BLM maps.

Comment Response 25 - The assumed time frames are consistent between the DEIS and the Air Quality Impact Assessment Technical Support Document (Volume I - Appendix A1)

emissions calculations for rig up/rig down, pipeline construction, and well pad/resource road construction. Because the completion and testing phase (during which flaring will take place) is estimated to occur for a maximum of 15 days, flaring emissions were conservatively calculated for a period of 15 days, 24 hours per day.

The time durations for rig up/rig down, pipeline construction, well pad/resource road construction, and completion/testing reported in the South Baggs DEIS are inconsistent with those used to calculate pollutant emissions in the Air Quality Impact Assessment Technical Support Document (Volume I - Appendix A2). However, because activity duration estimates reported for the CD/WIIPA were greater than those reported in the South Baggs EIS, the CD/WIIPA time durations were conservatively used to calculate South Baggs emission rates.

Finally, the Revised Air Quality Impact Assessment Technical Support Document text (Volume I - 2.1 Construction Emissions) has been revised to clearly describe the completion and flaring emission assumptions.

Comment Response 26 - As authorized under NEPA (40 C.F.R. 1502.21 and 40 C.F.R. 1502.24), the BLM provided a detailed description of the methodology used in performing the air quality impact assessment in separate Air Quality Impact Assessment Technical Support Documents (BLM 1999b and BLM 1999d). The BLM also assembled all air quality modeling inputs, codes, and results onto compact disks. All of these materials were available to the general public upon request, and copies were provided "for inspection by potentially interested persons within the time allowed for comment."

Comment Response 27 - The Revised Air Quality Impact Assessment Technical Support Document text (Volume I - 4.1 Meteorology and Figure 1.1) has been revised to indicate the correct location of Rawlins, Wyoming.

Comment Response 28 - A representative meteorological data set was selected for use in each modeling analysis. The Rock Springs data were selected due in part to Rock Springs's close proximity to the CD/WIIPA. These data also best represent typical regional meteorology conditions in southwest Wyoming, because they exhibit a greater frequency of high wind speeds and persistent wind direction.

The South Baggs surface meteorology data are representative of a small portion of the CD/WIIPA and were determined to be most representative of meteorological conditions at the South Baggs Project area. There are terrain features close to the South Baggs Project area that affect the observed meteorology.

Comment Response 29 - The Revised Air Quality Impact Assessment Technical Support Document text (Volume I - Table 4.1) has been revised to clearly indicate that the assumed CD/WIIPA background concentrations were based on data collected throughout southwestern Wyoming and northern Colorado.

Comment Response 30 - The particulate modeling analysis included emissions from construction activities at a single well site, and concurrent construction of adjoining well sites is not likely; therefore, well spacing was not addressed.

However, the dispersion modeling analyses for CO, NO_x, and HAPs examined production impacts at multiple well sites. For these analyses, the minimum well site spacing as defined in the Proposed Action (and displayed in the Air Quality Impact Assessment Technical Support Document, Volume I - Figure 5.2) was used to maximize potential impacts.

Comment Response 31 - Please see FEIS Section 7.2.84.2, Comment Response 29.

Comment Response 32 - The Revised Air Quality Impact Assessment Technical Support Document text (Volume I - Table B1-1.5) has been revised to clearly describe the table's contents.

Comment Response 33 - The Baggs, Wyoming, wind data were initially used in wind erosion calculations for the South Baggs Project area. Due to the similarity in surface disturbance size in the CD/WIIPA, the South Baggs calculated wind erosion emissions were also used in the CD/WIIPA inventory. This assumption resulted in an underestimation of wind erosion emissions in the CD/WIIPA.

The use of Rock Springs wind data would increase wind erosion emissions by approximately 55%. The calculated TSP emissions from well pad wind erosion increase from 123 lbs/hr to 190 lbs/hr, and PM-10 emissions from 61 lb/hr to 95 lb/hr.

This increase in wind erosion TSP and PM-10 emissions would increase the CD/WIIPA modeled concentrations. The maximum modeled total 24-hour TSP concentration would increase from 123.9 $\mu g/m^3$ to 149.8 $\mu g/m^3$. The maximum modeled total 24-hour PM-10 concentration would increase from 54.8 $\mu g/m^3$ to 66.7 $\mu g/m^3$, and the maximum total annual PM-10 concentration would increase from 19.8 $\mu g/m^3$ to 20.0 $\mu g/m^3$.

Both the FEIS text (Section 4.1.1.1 Proposed Action) and the Revised Air Quality Impact Assessment Technical Support Document text (Volume I - 2.4 Wind Erosion Emissions, and Table 5.2) have been revised to include these new values.

Comment Response 34 - As was done for previous NEPA documents and because the reference (Scheffe 1988) would not otherwise be "reasonably available for inspection by potentially interested persons" (40 C.F.R. 1502.21), the BLM included the most legible available copy in the Air Quality Impact Assessment Technical Support Document (Volume I - Appendix E: VOC/NO_x Point Source Screening Tables). Subsequent to your comment, the BLM contacted the author for a more legible version, but the document is currently out of print. Although the version printed for the DEIS is not perfect, the BLM finds the text completely legible and would gladly meet with the USFS to jointly review the document.

Comment Response 35 - As clearly described in the DEIS (Section 4.1.1.1 Proposed Action) and in the Air Quality Impact Assessment Technical Support Document text (Volume I - 5.1 Continental Divide/Wamsutter II Near-Field Modeling and 5.2

South Baggs Near-Field Modeling), potential near-field air quality impacts were modeled separately for each Proposed Action. However, for the far-field cumulative analysis (as described in the Final Air Quality Impact Assessment Protocol), given the same likelihood of potential development, both the Continental Divide/Wamsutter II and South Baggs Proposed Actions were combined and reported as "Project Sources." Although dependent on temporal meteorological conditions, distance to sensitive receptors, etc., it is safe to assume the combined predicted "Project Sources" impacts are dominated by the Continental Divide/Wamsutter II Proposed Action (with 3,000 wells, five compressor stations, and one gas plant) rather than the South Baggs Proposed Action (with 90 wells and one compressor station).

Comment Response 36 - The Revised Air Quality Impact Assessment Technical Support Document text (Volume II - Figure 3.2) has been revised to clearly show the modeled wind vectors.

Comment Response 37 - The Revised Air Quality Impact Assessment Technical Support Document text (Volume II - 4.2 Modeling Grid and Receptors) has been revised as recommended.

Comment Response 38 - Thank you for your comment. As clearly stated in of the Air Quality Impact Assessment Technical Support Document text (Volume II - 4.4 Dispersion Modeling Options), "The relative humidity correction is intended to account for aerosol growth by hygroscopic particles" and "The tabulated relative humidity adjustment factors in the FLAG report (National Park Service 1998) are used to determine F_R. Unlike the FLAG protocol, however, a maximum relative humidity of 90% has been used in computing F_R rather than 98%, because it is highly unlikely, due to non-uniform cloudiness, that fundamental aerosol and observed visibility criteria (i.e., homogenous atmosphere, uniform sky brightness, etc.) would occur under high relative humidity conditions in the analysis area. The basis for limiting aerosol growth at 90% relative humidity is because optical monitoring devices are not reliable at humidity values above this level. In CALPOST, the FLAG methodology is implemented as visibility method 2."

The basic formula for calculating visibility impacts, developed by H. Koschmieder in 1924, includes the assumption that sky brightness at the observer is similar to sky brightness at the observed object. As described in "Protecting Visibility - An EPA Report to Congress" (EPA 1979) "The effect on visual range of inhomogeneous illumination, such as that under scattered clouds, is difficult to analyze by elementary methods. Limited experimental evidence indicates that this effect may not be great for short visual ranges (less than 50 km)"; however, "The studies were conducted in relatively polluted conditions. The effect of scattered clouds or differing sky brightness on visual range in clean areas should be further investigated."

In 1991, the U.S. National Acid Precipitation Assessment Program (NAPAP 1991), in their "Report 24 - Visibility: Existing and Historical Conditions - Causes and Effects" stated "To the person on the street (and to perception investigators), visibility is associated with changes in the appearance of scenic characteristics (e.g., changes in color, loss of detail, or limits on the most distant visible feature). In addition to the optical characteristics of the atmosphere, lighting conditions and intrinsic scene characteristics control the appearance of scenes. Lighting conditions change continually due to variations in sun angle. Scene characteristics (i.e., cloud cover, vegetation, snow cover, etc.) are more erratic than sun angle changes and are generally beyond quantitative measurement or prediction. ... With a number of assumptions and for simple lighting conditions (e.g., no clouds in the sky) scene measurements can be used to estimate optical indexes." The report further stated "there are a number of variables such as sun angle, cloud cover, and scene composition that are firmly integrated into judgments of aesthetic value of a scenic resource. Therefore, studies designed to assess social, psychological, or economical value associated with a given change in atmospheric particulate concentration must be designed in such a way that these confounding variables do not affect the outcome of the experiment."

In addition, the DEIS applied the deciview visual index developed by Pitchford and Malm (1994) to indicate the potential for a "significant adverse" visibility impact. The authors concluded: "a 1 to 2 dv [deciview] difference corresponds to a small, visibly perceptible change in scene appearance where the assumptions used to develop the deciview scale are met." Their assumptions included "that the sky radiance at the target is the same as the sky radiance at the observer" (e.g., no clouds in the sky).

Finally, IWAQM (EPA 1998) makes no recommendation regarding the rejection of transmissometer data "on the basis of RH unless it exceeds ... 98%." IWAQM does state "As noted previously, visibility analyses are compared against a background condition. The estimates of background visibility conditions at Class I areas are derived from the IMPROVE (Interagency Monitoring of PROtected Visual Environments) network. There are several methods of obtaining estimates of the background visibility. These include reconstructed extinction from speciated measurements of particulate matter, direct measurement of extinction with a transmissometer, and estimates of extinction from photographs."

In fact, the IMPROVE "Standard Operating Procedures and Technical Instructions for Transmissometer Systems" (Air Resource Specialists, Inc. n.d.) and the EPA "Visibility Monitoring Guidance" (EPA 1999) both clearly state "When the relative humidity measured at the receiver is greater than 90%, the corresponding transmissometer measurement is flagged as having a possible interference" and "inferring a precise knowledge of the meteorological conditions along a sight path at high relative humidity from a single point measurement is very difficult. When the relative humidity is above 90% at one end of the path, small random temperature or absolute humidity fluctuations along the path can lead to condensation of water vapor causing meteorological interferences. Thus, in accordance with the conservative philosophy expressed above, the 90% relative humidity limit was selected for this test."

Comment Response 39 - Please see FEIS Section 7.2.84.2, Comment Response 32, and Section 7.2.91.2, Comment Response 30.

Comment Response 40 - The Revised Air Quality Impact Assessment Technical Support Document text (Volume II - 4.4 Dispersion Modeling Options) has been revised to state:

> "It would be desirable to have a longer time period to include many more meteorological-source impact events than is possible in a one-year data set. The very conservative, but much simpler, multi-year visibility screening analysis (method 2) projected impacts represent an upper estimate of potential air quality impacts which are unlikely to actually be reached."

However, the DEIS included both the very conservative, but much simpler, visibility screening analysis (method 2) and the more refined visibility impact analysis (method 4) results.

Finally, NEPA does not require the use of any specific method, including the USFS "protocols," for assessing potential visibility impacts in sensitive areas. Please also see FEIS Section 7.2.84.2, Comment Response 32, and Section 7.2.93.2, Comment Response 2.

Comment Response 41 - Although conditions may be different on the eastern side of the Continental Divide, the availability of measured visibility data to characterize these differences is limited. The method 2 background visibility values provided by the USFS did not distinguish between the eastern and western sides of the Continental Divide. For method 4, the transmissometer data is also only available on the western side of the continental divide, so the assumption that the Bridger data is representative of the entire area is necessary, given the available data. Please also see Comment Response 7, above.

Comment Response 42 - The ANC values used for Deep Lake and Lower Saddlebag Lake were those identified in the Final Air Quality Impact Assessment Protocol. Although the revised values do not have any material impact on the results or conclusions, the FEIS text (Table 4.5) and the Revised Air Quality Impact Assessment Technical Support Document text (Volume II - 5.3 Deposition Fluxes and Table 5.11) have been recalculated based on the revised background ANC values provided by the USFS.

Comment Response 43 - The Revised Air Quality Impact Assessment Technical Support Document text (Volume II - 5.3 Deposition Fluxes) has been revised to include the full set of atmospheric deposition/lake chemistry equations.

Comment Response 44 - As clearly described in the Air Quality Impact Assessment Technical Support Document text (Volume II - Appendix C Analysis of Visibility Data in SW Wyoming and NW Colorado) "the 1995 Mount Zirkel PSD Class I Area nephelometer optical data are flawed, and should not be used in the Continental Divide/Greater Wamsutter II and South Baggs Projects Air Quality Impact Assessment," "the Mount Zirkel data displayed much greater variability, sometimes up to 100 km changes in a single day. The Mount Zirkel data were especially erratic in the winter months, but even when they 'settled down' in the summer months, the measured visibility values were typically 50 km higher (more clear) than either the Bridger or Rocky Mountain values. Erratic Mount Zirkel winter values could be consistent with local pollution source impacts and/or atmospheric cleansing by snowfall, and the summertime offset could be consistent with an incorrect assumption of Rayleigh (pure air) scattering and/or a background light absorbing component. Regardless of the cause, the Mount Zirkel data are too inconsistent to properly represent background conditions."

The assertion that "the only real difference between the data of Mt. Zirkel and RMNP [Rocky Mountain National Park], is that Mt. Zirkel data shows cleaner visibility" and "that by erroneously using data to represent Mt. Zirkel, the future visibility impact at Mt. Zirkel from the proposed actions may be greatly underestimated" is plausible given a very simplistic comparison of nephelometer and transmissometer data. However, a more thorough understanding of how these monitoring devices operate (EPA 1999) support excluding the Mount Zirkel nephelometer data.

The Bridger and Rocky Mountain transmissometers measure the actual, total optical extinction observed in the atmosphere over a path length of nearly 4 to 8 km at elevations around 2,500 m. Transmissometers do not modify the atmosphere in any way and directly measure light absorption due to particles (such as soot) and gases (such as NO_2) and light scattering due to particles (both fine and coarse size ranges) and gasses (Rayleigh scattering). Most importantly, transmissometers measure the optical characteristics that a human observer would see, that is, a smoke plume or clouds in the sight path will indicate high extinction and low visibility.

The Mount Zirkel nephelometer measures only a portion of light scattering due to particles (abbreviated to a 170°, rather than a 180°, acceptance angle), by drawing a continuous air sample into a nearly 20 x 20 x 25-cm sample chamber at an elevation of around 3,100 meters. Nephelometers cannot measure light absorption due to particles or gasses and measure only a portion of the coarse particle scattering. Since nephelometers are periodically calibrated to "zero" with filtered air, they do not directly measure gaseous (Rayleigh) scattering, and unlike transmissometers, calibration errors are multiplicative rather than additive (Sisler 1996). Finally, and most importantly, nephelometers will erroneously indicate the best (most clear) visibility conditions during precipitation events which remove light scattering particles by wet deposition (e.g., a nephelometer may indicate over 390 km visibility during a snow storm where actual visibility is less than 10 m).

Given these physical differences in the two visibility measuring instruments, the nephelometer will consistently report lower extinction (clearer visibility) than a transmissometer, even if both instruments were measuring exactly the same atmospheric conditions.

Light scattering due to particle growth can be very significant under high relative humidity (RH) conditions. For example, given an equal and constant concentration of fine (ammonium sulfate) particles, light scattering increases by nearly: 2x at 70% RH, 3x at 80% RH, 5x at 90% RH, 10x at 95% RH, and over 20x at 98% RH. However, even though both the transmissometer and nephelometer measure increased optical

extinction due to particle growth with increasing relative humidity, the interagency IMPROVE protocol identifies transmissometer values measured above 90% relative humidity as invalid due to meteorological interference.

As clearly reported in the Air Quality Impact Assessment Technical Support Document text (Volume II - 5.2 Visibility Impacts), both the Bridger and Rocky Mountain transmissometers measured nearly 5,000 hours of valid data during 1995. Conversely, the "Mt. Zirkel Wilderness Area Reasonable Attribution Study of Visibility Impairment" (Watson et al. 1996) reported less than 4,200 hours of valid nephelometer data in 1995. In addition, the "Attribution Study" presented hourly observed Mount Zirkel nephelometer measurements which fluctuated wildly between 10 and 60 Mm-1, especially during winter periods at greater than 90% RH, and when localized existing sources of sulfate were potentially influencing the nephelometer.

To summarize, given its high sampling elevation and location, it appears the Mt. Zirkel nephelometer (when reporting valid data) was measuring low particle scattering within clouds (above the mixed layer), with occasional intrusions of sulfate from within the mixed layer, during much of 2005. The 1995 Mt. Zirkel nephelometer data were too incomplete and inconsistent to properly represent background conditions.

Comment Response 45 - Comments specific to the South Baggs DEIS are addressed in the South Baggs FEIS.

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Predicted Change to Acid Neutralizing Capacity in Class I and II Sensitive Lakes:
"Potential impacts to sensitive lakes would be well below applicable significance thresholds, both from the proposed project sources and from all potential cumulative sources combined."

Predicted Visibility Impacts to PSD Class I and II Sensitive Areas:
"The refined visibility impact analysis predicted that a "just noticeable change" greater than 1.0 deciview impact would occur on a single day at only the PSD Class I Rawah Wilderness Area. " "This predicted impact would not occur from the project sources or the No Action scenes alone , but from all sources combined (total cumulative sources)." (emphasis added)

The DEIS goes on to say that a number of reasonable but conservative (emphasis added) assumptions were made regarding the potential resource development. Examples of these assumptions include: 1) the number of wells that may ultimately be approved and drilled, 2) the amount of compression ultimately necessary to transport the produced natural gas, 3) the type of equipment that will be used, 4) and the equipment's specific location.
The bureau has also indicated that the analysis was based on a "reasonable foreseeable" development scenario which included several conservative assumptions. These assumptions included;

1. "All existing background emission sources were assumed to operate at their existing emission rates continually (no reductions or closures) throughout the life LOP."
2. "All potential natural gas wells were assumed to become fully operational (no dry holes), and remain operating (no shut ins) throughout the LOP."
3. "All cumulative emission sources were assumed to operate at their "reasonably foreseeable" maximum emission rates simultaneously throughout the LOP." "While this assumption is typically used in modeling analyses, the predicted impacts will be overstated (emphasis added)."
4. "The proposed natural gas compression was assumed to operate continuously throughout the LOP." "In reality, natural gas compression equipment would be added or removed incrementally as required by well field operations."

In summary the DEIS document states that "Based on these numerous "reasonable, but conservative analysis assumptions, which actually surmound one another, the projected impacts represent an upper estimate of potential air quality impacts which are unlikely to be reached (emphasis added)."

Section 4.1.1.5, Mitigation and Monitoring, outlines additional potential BLM-required mitigation measures which could be implemented/required in the development of the CD/WI/PA. If implemented the BLM states that these mitigation measures would further reduce NOx emissions from the project area. Based on the results of the DEIS air quality impacts assessment, as summarized above, Amoco Production Company does not believe that the additional mitigation discussed is necessary in the ongoing development of the CD/WI project area. It is Amoco's recommendation that the permit be authorized without any additional BLM-required mitigation. As noted in the DEIS, before the installation of additional project area compression could occur (the largest project proposed NOx emission source) the Wyoming DEQ-Air Quality Division would review the site specific air pollutant emissions pre-construction permit. Therefore, as the development occurs, protection of the air quality resources would be left with the agency whose duty it is to protect the resource.

3

Amoco believes it is also important to provide comments, in support, of the BLM's utilization of what has come to be known as the Method 4 air impacts modeling methodology (refined analysis). Amoco would also like to make comments on several actual NOx emission reductions that have occurred in southwest Wyoming but were not accounted for the CD/WI EIS air impacts modeling effort. While Amoco does not believe additional air modeling should be proposed, it does feel the need to identify these unaccounted for

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July 14, 1999

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BUREAU OF LAND MANAGEMENT
RAWLINS FIELD OFFICE

Mr. Chirs Miller
Rawlins Field Office
Bureau of Land Management
P.O. Box 2407
Rawlins, Wyoming 82301-2407

RE: Amoco Production Company Comments
Continental Divide/Wamsutter II Natural Gas Project
Draft Environmental Impact Statement

Dear Mr. Miller:

Amoco Production Company appreciates the opportunity to provide these comments for BLM consideration on the Draft Environmental Impact Statement (DEIS) for the Continental Divide/Wamsutter II Natural Gas Project. Amoco hopes these comments are given serious attention as the BLM continues through the NEPA process on this project proposal. Amoco also hopes that a timely decision is rendered that authorizes the full field development - proposed action.

Section 2.3 Alternative A - 14 Acre Maximum Surface Disturbance per Federally Managed Section in SRA's

1 This alternative, if selected, is viewed by Amoco as being restrictive and difficult to implement. Pad development, which Amoco has used in the project area, could potentially make this alternative viable. But unless gas reserves are significant enough to offset the additional cost of directional drilling, this alternative could make some federal natural gas resources, that lie under SRA's, inaccessible.

2 The BLM must also consider the impact that the implementation of Alternative A and B may have on BLM. Maintaining surface disturbance numbers within defined SRA's has the potential to place additional burden on BLM field staff.

Section 4.1.1 Air Quality
Section 4.1.1.5 Mitigation and Monitoring - Additional Potential BLM Required Measures
The cumulative impacts assessment that was performed to predict potential future fie-field air quality impacts used the EPA developed CALMET/CALPUFF modeling tool. The modeling tool was used to predict maximum potential air quality impacts in sensitive downwind PSD Class I and Class II areas. Impacts that were predicted and presented include, 1) determination if the PSD Class I and II NO2 increment might be exceeded, 2) calculate potential ozone and sulfate atmospheric deposition (and there related impacts) to sensitive lakes, and 3) predict potential impacts to regional visibility. The results of the air quality impacts assessment and predicted impacts to these sensitive resources are also provided in this section of the DEIS. The results are summarized as follows:
Cumulative Direct Project NO2 Impacts:
"Cumulative direct project impacts would be well within applicable PSD Class I and II increments at all (emphasis added) sensitive areas."

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emission reductions. These reductions coupled with the other already conservative assumptions presented in the DEIS demonstrate how the potential impacts, already identified as insignificant in the document, are likely an over-prediction of what will actually ever occur.

Firstly regarding the utilization of the refined analysis (Method 4). It is important to note that the Method 4 methodology is consistent with EPA Modeling Guidelines regarding the use of background ozone concentrations in a refined air quality impacts analysis. In such an analysis background conditions are analyzed as a function of the meteorological conditions. There are several other attributes that lend credibility to the calculation procedure that has been used by BLM. First, because background measurements are made continuously (hourly) a large database is available. Thus for a single year it is possible to record all the variation in background visual range. Secondly, this measurement procedure provides a path integrated measurement (over 1-2 kilometers) and is a direct measure of the visual range. This is opposed to the use of the IMPROVE particulate matter (PM) concentration measurements which represent a single point in space and from these data a reconstructed visual range is calculated. Third, the changes in visual range that were calculated in the BLM Method 4 analysis utilize the same background frequency distribution. Thus, the impact of development was quantified for the clearest day to well as all other days. Again, this provided additional realism in the analysis. It is also important to contrast the Method 4 methodology with the screening calculations (Method 2) that were also performed by BLM and presented in the DEIS. In the Method 2 calculation procedures it was assumed that background visual range conditions remained constant, at the 90th percentile level the all days of a particular season. In this context it was assumed that the clean days would occur on every day of the year and then the model predicted change in visibility was referenced to these clean conditions. These screening calculations present an idealized representation of the calculated change in visual range and these calculations have no physical reality.

4

There is another important issue with the Method 2 calculation that Amoco has discovered. This approach uses background visual range measurements, which represent an average visual range over multiple years of measurements (approximately 10 years). Because the IMPROVE PM atmospheric measurements were a result, developing a composite average is necessary in order to calculate a robust statistical average. The data used in the analysis included measures collected during 1997. In the context of a cumulative EIS analysis the use of such average background data is very problematic with respect to its relationship with the modeling emissions inventory. In the cumulative analysis, sources were included in the modeling if their impacts are not included in the background measurements. The problem identified is that by using multiple years of background data because blurred and the potential exists for double counting sources impacts through modeling and background measurements. Using Method 2 in the DEIS, there was substantial double counting of sources in the permitted but not constructed category. The background measurements used reflected conditions through 1977 (Bridger 1988 through 1997 and Mt. Zirkel 1994 through 1997). The emission inventory used in the CD/WI EIS modeling reflected sources in the permitted but not constructed category beginning in 1994. Thus sources that became operational, or terminated their operating permits, between 1994 and 1997 have impacts that are potentially double counted in the analysis. Quantification of the magnitude of this double counting is summarized in Table 1 for the pollutants modeled. As indicated in this table, elimination of the double counting in emissions inventory reduces total NOx emissions by 3,253 tons per year or 73% of the permitted but not constructed inventory. This double counting leads to a very conservative underlying assumption regarding the behavior of analysis. Amoco recognizes that the double counting is not an issue in the Method 4 refined analysis. While Amoco continues to support the use of the refined analysis (Method 4) as the basis for the CD/WI EIS decision, it does believe that if the screening analysis (Method 2) were to be used as a basis for the BLM decision, the emissions inventory should be adjusted to be consistent with the background measurements and the emission reductions identified in Table 1 should be reflected in the modeling inventory.

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6

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Table 1. Comparison of EIS Modeled Source Emissions and Emissions Summarized From New Permit Credit Rates

State	Pollutant	EIS Inventory Credit Rates (tons/year)	Inventory Credit Rates Based on 97 Data (tons/year)	Percent of Modeled Emissions	Inventory Difference	Inventory Difference
Wyoming	Maximum Annual NOx	3610	1750	3	1717	1717
Wyoming	Maximum Annual NOx	4823	1500	3	3323	3323
Wyoming	Maximum Annual NOx	3192	1192	3	2000	2000
Colorado	Maximum Annual NOx	7400	307	25	7093	93
Colorado	Maximum Annual NOx	101	72	69	29	31
Colorado	Maximum Annual NOx	0	0	0	0	0
Wyoming	Wells	181	73	41	108	39
Colorado	Wells	31	11	35	20	47
Total	NOx				159	14
Total	PM10				1875	1756
Total	SO2				1037	805

Source: Modeled Source Emissions and Emissions Summarized From New Permit Credit Rates based on 97 Data (tons/year) Inventory Difference

13 — Section 4.1.5 Paleontological Resources
Section 4.1.5.1 Mitigation and Monitoring Additional Potential BLM-Required Mitigation
The BLM describes potential ideas for additional mitigation as follows, "and BLM may require a thorough survey of the CD/WIPA prior to disturbance to identify the potential significance of vertebrate paleontology in the Tertiary outcrops that occur throughout the area." This additional mitigation measure would be very costly, take substantial time, and from Amoco's perspective be unnecessary considering only 2.1% of the entire project area would be disturbed under the full field development proposed action. Again, considering that the EIS analysis indicated that with the implementation of applicant committed mitigation coupled with existing protection requirements the impact to Paleontological resources would remain insignificant, no additional mitigation is warranted.

14 — Section 4.1.6 Soils
Section 4.1.6.1 Mitigation and Monitoring Additional Potential BLM-Required Mitigation
Additional Potential BLM-Required Mitigation identified in this section are for the most part SOP. If an area is identified to have the potential for highly erosive soils, avoidance is certainly the primary mitigation. Also, if an area is identified with high erosion potentials and the BLM asked for additional measures to be taken to minimize an impact, Amoco would certainly comply with any reasonable request. The additional erosion control measures identified in this section seem appropriate. The measure identified that appears to be most inappropriate would be the request to temporarily revegetate topsoil stockpiles. Most stockpiles of topsoil are reused within one or two years after initial disturbance. Therefore, unless the topsoil stockpile was to remain unused for an extended period of time, temporary revegetation of that stockpile is inappropriate.

15 — Also, federal and state regulations require that a Storm Water Pollution Prevention Plan (SWPPP) be implemented for any surface disturbance that would exceed 5 acres in total area. Included in this plan is the implementation of certain erosion control measures and periodic monitoring. Amoco Production Company has applied for and received a Generic Permit from the State of Wyoming which covers all surface disturbing activity in the Wamsutter Field. A monitoring program has been established that provides for inspection of implemented measures annually unless the disturbance is within 1/2 mile of a surface water body. In that situation inspections are conducted quarterly. Once the location is successfully reclaimed back to the location production equipment, the erosion potential is greatly minimized and a request is made to terminate the permit associated with the site specific SWPPP. With these identified measures and applicant committed mitigation, impacts to soils in the project area should be insignificant. Additional mitigation is not warranted.

16 — Section 4.1.7 Surface and Ground Water
4.1.7.1 Mitigation and Monitoring Additional Potential BLM-Required Mitigation
Additional Potential BLM Required Mitigation outlines several additional mitigating opportunities that are somewhat concerning to Amoco Production Company. The first indicates, "Construction in erosion-prone and high-salinity areas may be restricted, and necessary construction in these areas may be authorized only in the late summer, fall, and winter to avoid peak runoff periods." Earlier in the DEIS document, it was indicated that construction would be limited or restricted during the period from April through June. Therefore, this potential mitigation would limit construction in these areas to only late summer and early fall. This could be very limiting and unnecessary considering the nature of the applicant committed mitigation and other regulatory mandates that direct construction activities in the project area. While all these measures MAY seem appropriate in areas where surface disturbance might occur in fairly close proximity to a perennial surface water body, it does NOT seem appropriate for implementation throughout the CD/WI project area.

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7 — Again, Amoco Production Company does not support the need for additional air quality modeling but does believe it is important to point out recent annual emission reductions that have occurred in southwest Wyoming and that were not part of the presented CD/WI EIS modeling results. The refined modeling analysis (Method 2) indicated that for day 185, the day with the highest impacts in the Rawlt Class I area, that emissions from the Wyoming Interstate Company had a very significant impact. A review of the modeling and permit files was conducted and concluded that Wyoming DEQ permit # CT-1287 had modeled at a NOx emission rate of 246.7 tons per year. The Wyoming permit, however, indicated that this source had undergone a 163.5 ton per year reduction in order to opt out of New Source Review (NSR). This reduction is permanent and cannot be applied to other sources. This is the modeling of impacts for this critical source. NOx emissions are overstated by +200.2 tons per year. Since this is a real and permanent reduction in emissions, any additional modeling that may be required should incorporate this reduction into the analysis.

8 — Also, in the June 11, 1999 quarterly report from BLM regarding NOx emission tracking in the BLM Rock Springs District, the report indicated that a 377.9 ton per year NOx reduction would be included in the July 1999 report for the UPR Brady Gas Plant in Sweetwater County. This emission reduction was also not accounted for in the CD/WI EIS air impacts analysis and should be incorporated into any future modeling efforts.

9 — Another example of actual emission reductions that were not incorporated into the CD/WI EIS analysis are the 1000 tons from the Naughton Power Plant in Lincoln County.

The emissions reductions that are demonstrated above are just more examples of the conservative nature of the analyses that was performed for the CD/WI EIS air impacts study and further support how the impacts predicted and presented in the DEIS represent an "upper extreme of the potential air quality impacts which are unlikely (emphasis added) to actually be reached."

Section 4.1.2 Topography and Physiography
Section 4.1.2.2 Mitigation and Monitoring Additional Potential BLM-Required Measures
This section describes mitigation which could be implemented to further reduce impacts that are already determined to be insignificant to topography and physiography. Insignificant impacts are being predicted for the proposed action as well as both Alternatives A and B.

10 — If impacts are predicted to be insignificant through the implementation of applicant committed measures, existing regulatory SOP's/requirements, and strides oil and gas operators have made to reduce the size of disturbance areas, no additional measures should be necessary.

Section 4.1.4 Geologic Hazards
Section 4.1.4.3 Mitigation and Monitoring Additional Potential BLM-Required Measures

11 — Earthquake potential in and around the CD/WIPA is defined by the BLM in the DEIS as low to moderate and therefore impacts from these earthquake hazards would not be significant. Retooling that wells, pipelines, and ancillary facilities be designed differently to withstand these low probability occurrences is unnecessary.

12 — To prevent the reactivation of vegetation-stabilized sand dunes avoidance is certainly the most appropriate mitigation. Where possible Amoco Production Company, due to dune reactivation and other resource related issues, will avoid these areas. However, if disturbance is necessary in these sensitive areas the alternate reclamation practices described in the Appendix A (Reclamation Plan) should adequately mitigate impacts to these areas. No additional mitigation is warranted.

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13 — Section 4.1.5 Paleontological Resources
Section 4.1.5.1 Mitigation and Monitoring Additional Potential BLM-Required Mitigation
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Section 4.1.6.1 Mitigation and Monitoring Additional Potential BLM-Required Mitigation
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15 — Also, federal and state regulations require that a Storm Water Pollution Prevention Plan (SWPPP) be implemented for any surface disturbance that would exceed 5 acres in total area. Included in this plan is the implementation of certain erosion control measures and periodic monitoring. Amoco Production Company has applied for and received a Generic Permit from the State of Wyoming which covers all surface disturbing activity in the Wamsutter Field. A monitoring program has been established that provides for inspection of implemented measures annually unless the disturbance is within 1/2 mile of a surface water body. In that situation inspections are conducted quarterly. Once the location is successfully reclaimed back to the location production equipment, the erosion potential is greatly minimized and a request is made to terminate the permit associated with the site specific SWPPP. With these identified measures and applicant committed mitigation, impacts to soils in the project area should be insignificant. Additional mitigation is not warranted.

16 — Section 4.1.7 Surface and Ground Water
4.1.7.1 Mitigation and Monitoring Additional Potential BLM-Required Mitigation
Additional Potential BLM Required Mitigation outlines several additional mitigating opportunities that are somewhat concerning to Amoco Production Company. The first indicates, "Construction in erosion-prone and high-salinity areas may be restricted, and necessary construction in these areas may be authorized only in the late summer, fall, and winter to avoid peak runoff periods." Earlier in the DEIS document, it was indicated that construction would be limited or restricted during the period from April through June. Therefore, this potential mitigation would limit construction in these areas to only late summer and early fall. This could be very limiting and unnecessary considering the nature of the applicant committed mitigation and other regulatory mandates that direct construction activities in the project area. While all these measures MAY seem appropriate in areas where surface disturbance might occur in fairly close proximity to a perennial surface water body, it does NOT seem appropriate for implementation throughout the CD/WI project area.

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17 — This section also identifies the need to "reduce suspended sediment loads and remove potential contaminants, the operators may be required to treat diverted water in detention ponds prior to release." "Prior to discharge, water would be treated or filtered if necessary to reduce contaminant levels and/or reduce suspended particles to meet applicable state or federal standards." "If water is discharged into an established drainage channel, the rate of discharge would not exceed the capacity of the channel to convey the increased flow." Again, while all these measures MAY seem appropriate in areas where surface disturbance might occur in fairly close proximity to a perennial surface water body, it does NOT seem appropriate for implementation throughout the CD/WI project area.

18 — Reserve pit liner requirements, if implemented, should better define or remove the first bullet point on page 4-38, "where soils would not hold fluids." The other bullet points leave direct applicability to environmental risk potential and are therefore appropriate.

19 — This section also states, "Additional monitoring and erosion and runoff control measures may be applied on disturbed areas in the Antelope/Deer Creek drainage's to ensure no further degradation of stream channels." In Chapter 3 of the DEIS, the BLM has identified that Antelope and Bitter Creeks are the only perennial streams that occur in the area. Chapter 3 also indicates the BLM performed a 1998 assessment to determine proper functioning condition (PFC) of these two perennial streams. It would appear that the criteria for PFC and FAR are fairly loosely defined. Since no baseline data is available that would apply the PFC/FAR criteria to these two water bodies prior to surface disturbing activities, it would be difficult to draw the conclusion that the streams were ever meeting the current PFC criteria. This area is defined as a high desert environment that receives very little moisture and frequently encounters high wind conditions. In an environment such as this, Amoco believes that perennial streams that are located in areas of low or no man-made surface disturbance could easily meet the functioning at risk (FAR) criteria. Requiring oil and gas operators to monitor and implement additional erosion control measures in the Antelope/Bitter Creek drainage's seems inappropriate considering what appears to be a semi data set at best. Additionally, oil and gas operations are not the only source of potential increased erosion in these two drainage's. If implemented, an equitable arrangement to share in the proposed monitoring is only appropriate.

20 — "To protect surface waters from potential depletion, the BLM may require water wells to be drilled to depths greater than 1,000 ft." Since the DEIS cumulative impacts assessment identified the potential for excessive depletion of the ground water resources to be insignificant, to require water wells to be drilled to depths greater than 1,000 ft is unnecessary.

21 — "Operators may be required to conduct visual monitoring reconnaissance of surface waters to detect changes in water quality resulting from sedimentation." Please note discussion/comment regarding Antelope and Bitter Creek Drainage's above.

22 — Cumulative impact to surface and ground water, Section 4.1.7.6 states, "Surface water quality would be protected using measures similar to those described for the Proposed Action, for all other projects in the vicinity of the CD/WIPA, and thus, cumulative impacts are anticipated to be insignificant." Considering these impact assessment results for this resource, additional mitigation would appear to be unnecessary.

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Section 4.1.8 Noise and Odor
4.1.8.2 Mitigation and Monitoring: Additional Potential BLM-Required Mitigation

23 Additional Potential BLM-Required Mitigation identifies that, "Construction, drilling, completion, testing, and production facility installation activities may be limited within 0.25 mi. of other distance of occupied residences, on crucial game ranges during critical winter periods, within 1.0 mi. of active raptor nests during the breeding and nesting period, and within 0.25 mi. of sage grouse leks at all times and within 2.0 mi. of leks during the nesting season." These potential mitigation measures are certainly more restrictive than current requirements or guidelines. Unless quantifiable substantiation can be provided for changing the current regulation or guideline, these potential mitigation opportunities are unnecessary. Currently the setback of tanks and/or production equipment is 350 feet or greater from any residence, school, hospital, or other places where people are known to congregate (pursuant to Section 40(e) Wyoming Oil and Gas Conservation Commission Rules and Regulations). Also, the 1.0 mi. seasonal restriction for active raptor nests is specific to the ferruginous hawk species and is 0.5 miles for all other active raptor nests. Again, a modification of this raptor protection guideline, unless justified with data which indicates the modification is warranted, is unacceptable.

Section 4.2.1 Biological Resources
Section 4.2.1.4 Mitigation and Monitoring: Additional Potential BLM Required Mitigation

24 Based on comments provided in Section 4.2.1.6, only 2.4% of the 4.5 million acre NEPA assessment area would be disturbed (this includes existing and proposed). Assuming the successful post-development revegetation of all of the disturbed areas would be accomplished, any long-term impacts to biological resources were predicted to be insignificant. Therefore, additional potential BLM-required mitigation is unnecessary.

Section 4.2.2 Wetlands and Riparian Areas
4.2.2.2 Mitigation and Monitoring: Additional Potential BLM-Required Mitigation

25 Since these areas are typically avoided, the maximum LOP disturbance in these areas (wetlands and riparian) within the project area would be 0.5 acres. Impacts to wetland and riparian habitats have been determined to be insignificant. Additional potential BLM-required mitigation is unnecessary.

Section 4.2.3.1 Wildlife and Fisheries
Section 4.2.3.1 Elk Game/Other Mammals: Proposed Action

26 Within the Proposed Action discussion of this section there a number of places were the BLM has identified definatively the number of wells that WOULD be located within certain big game sensitive areas. For example on page 4-48, first column, last paragraph the sentence reads, "Thirty three of the proposed well locations would (emphasis added) be located within crucial winter/yearlong range for the Baggs mule deer herd, which would be the only crucial mule deer range affected by the proposed Action." Amoco understands the BLM's need to make some judgments regarding possible well locations within these sensitive resource areas for the purposes of analysis. However, using the word would in this sentence leads the public to believe that this outcome is definite when in actuality that outcome is truly speculative. Amoco recommends that would be changed to could. Please make this change in all text of the DEIS in which the word would is speculative.

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Additional Potential BLM-Required Mitigation

27 The additional potential BLM-required mitigation section describes that, "The BLM may require the application of the scientific method to various components of the Wildlife Protection Plan to assist in identifying cause and effect relationships were wildlife populations appear to be declining in the CD/WDPA." Amoco Production Company agrees that if trends are discovered through the implementation of the defined Wildlife Protection Plan that a scientific based study be initiated to identify the "cause and effect" relationship that may be affecting a particular species. Amoco Production Company would agree to evaluate its participation in a cooperative effort to perform this more detailed analysis. Amoco does not believe such an effort should be solely funded by the oil and gas operators in the CD/WDPA.

Cumulative Impacts

28 This section simulates a potential cumulative significant impact to the Red Desert pronghorn herd due to over 5% direct impact (cumulative surface disturbance) to this herds crucial winter/yearlong range. It is important for the decision maker to recognize that the proposed action will only represent a 0.2% reduction in overall crucial winter range for this herd. Therefore, while the cumulative disturbance exceeds 5%, that which will be contributed from the projects alone is just 0.2%. Worth noting is another interesting comparison between the Red Desert herd and the other pronghorn herds that exist within the project area. The Sliver Creek herd for example has a total existing disturbance of only 0.8% (as predicted by the CD/WI DEIS) of its crucial winter/yearlong range and at the same time this herd, in 1996, was at 70% of population objective. While the Red Desert herd which has total existing crucial winter/yearlong disturbance equal to 4.4% (again, as predicted by the CD/WI DEIS) was also at 70% of population objective in 1996. This data might suggest that small amounts of disturbance to crucial winter/yearlong range may play a smaller role in population trends than what is suggested in the CD/WI DEIS.
It should also be noted that as part of the Wildlife Monitoring and Protection Plan there will be the continued evaluation of disturbance within crucial winter range and monitoring data collected on herd population trends.

Section 4.2.3.2 Birds
Additional Potential BLM-Required Mitigation

29 This section identifies that, "for pits that contain oil or other potentially toxic substances, pit reservation would begin immediately (i.e. within 15 days) after cessation of drilling and testing activities; or pits would be netted." Amoco Production Company has no problems with the netting and fencing of reserve pits that environmentally contain hazardous materials. Amoco is however concerned with the associated hand-filling of reserve pits until those pits are allowed to completely dry by evaporation. The restriction of "squeezing" reserve pits before being allowed to fully dry would increase the potential for reserve pit leaking reclamation and the need to re-construct and again reclaiming the reserve pit area. This duplication of reclamation efforts will greatly increase the site reclamation cost. Adequate netting and fencing will protect birds and other wildlife from a potentially harmful reserve pit.

30 This section, page 4-62, line 28, states that "Activities or surface disturbance may not be allowed within 0.25 mi. or greater distance of sage grouse lek centers (active or inactive) at any time, and all surface disturbance within 0.25 mi. would be avoided, where practical." Amoco does not understand the potential mitigation that indicates, activities or surface disturbance may not be allowed with 0.25 mi. or greater distance ?? If this is suggesting that the BLM would consider extending the 0.25 mi. buffer around both active and inactive sage grouse leks to some greater distance, Amoco requests that the BLM would state the suggested distance on sound data that could substantiate the greater distance. BLM is currently undertaking a study of sage grouse and until results of this analysis have concluded Amoco believes that it is premature to expand sage grouse lek protection buffers.

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31 "To protect prostrate sage grouse nesting habitat, construction or drilling activities may not be allowed on sage grouse nesting habitat within 2.0 mi. of lek centers between March 1st and June 30th." Amoco believes that this language as stated could significantly impact its ability to construct and drill natural gas wells within the project area. Amoco has agreed to restrict activity within this 2 mi. buffer but would not agree to totally eliminate our ability to survey the area within 2.0 mi. of sage grouse leks for nesting sage grouse. If no nesting sage grouse are discovered, Amoco would like to continue to request and be granted an exception to construct and drill a location within this 2.0 mi. area. Existing sage grouse nesting protection stipulations provide for adequate protection of nesting sage grouse. Based on the analysis which included operator committed mitigation and existing issue/BMP stipulations no significant impacts were predicted to sage grouse. Therefore, no Additional Potential BLM-Required Mitigation is warranted.

32 "The BLM may require operators to finance raptor nest searches by qualified biologists to determine the activity status of raptor nests within 1.0 mi. of proposed disturbance areas, and data collected during these previously conducted surveys would be used during APD and ROW application processes to asses potential development impacts to nesting raptors and avoid raptor nesting areas, as necessary." As defined in Table D-2.2 (within the Wildlife Monitoring and Protection Plan) raptor nest inventory/monitoring on areas with greater than or equal to a 4 well location per section plus a 1 mi. buffer and selected undeveloped areas would be monitored on an annual basis by a BLM surveyor. This effort would be assisted financially by the oil and gas operators by providing for the cost of aircraft rental to perform these surveys. As long as the BLM follows through with Wildlife Monitoring and Protection Plan obligations, there should be no need to require the operators to perform this raptor nest surveying.

33 "Activities near active raptor nests may be prohibited within a 1.0 mi. radius or other distance as necessary to avoid disturbing birds from February 1 through July 31." This seasonal distance without stipulation is typically applied between 0.5 mi. and 1.0 mi. depending on raptor species. Amoco has committed to complying with this seasonal stipulation and does not believe a change like that being described is appropriate without the substantiating data to support that change. With the currently defined operator agreed to mitigation and with the implementation of the Wildlife Monitoring and Protection Plan, the DEIS analysis predicted no significant impacts. Therefore, no additional BLM required mitigation should be necessary.

34 "Operators, in cooperation with the BLM, may be required to monitor raptor nesting and sage grouse lek use on and adjacent to the CD/WDPA to ensure that these sensitive resources are protected throughout the LOP." Again, as defined in the Wildlife Monitoring and Protection Plan, the BLM has agreed to assume responsibility for the raptor nesting and sage grouse lek use monitoring. As long as the BLM follows through with these agreed to obligations, there should be no need to require the operators to perform this raptor nesting or sage grouse lek use surveying.

Section 4.2.4 Wild Horses
35 Section 4.2.4.6 Cumulative Impacts states, "the loss of habitat due to project construction is not anticipated to result in significant impacts to wild horses." "Cumulative impacts to wild horses are anticipated to be insignificant since wild horse population objectives are currently being met or exceeded in all affected WHMA's, and maintenance activities have the potential to provide increased forage for wild horses for the long-term." Based on these statements, no additional BLM-required mitigation is warranted.

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Additional Potential BLM-Required Mitigation
The additional potential BLM-required mitigation section describes that, "The BLM may require the application of the scientific method to various components of the Wildlife Protection Plan to assist in identifying cause and effect relationships were wildlife populations appear to be declining in the CD/WDPA." Amoco Production Company agrees that if trends are discovered through the implementation of the defined Wildlife Protection Plan that a scientific based study be initiated to identify the "cause and effect" relationship that may be affecting a particular species. Amoco Production Company would agree to evaluate its participation in a cooperative effort to perform this more detailed analysis. Amoco does not believe such an effort should be solely funded by the oil and gas operators in the CD/WDPA.

Cumulative Impacts
This section simulates a potential cumulative significant impact to the Red Desert pronghorn herd due to over 5% direct impact (cumulative surface disturbance) to this herds crucial winter/yearlong range. It is important for the decision maker to recognize that the proposed action will only represent a 0.2% reduction in overall crucial winter range for this herd. Therefore, while the cumulative disturbance exceeds 5%, that which will be contributed from the projects alone is just 0.2%. Worth noting is another interesting comparison between the Red Desert herd and the other pronghorn herds that exist within the project area. The Sliver Creek herd for example has a total existing disturbance of only 0.8% (as predicted by the CD/WI DEIS) of its crucial winter/yearlong range and at the same time this herd, in 1996, was at 70% of population objective. While the Red Desert herd which has total existing crucial winter/yearlong disturbance equal to 4.4% (again, as predicted by the CD/WI DEIS) was also at 70% of population objective in 1996. This data might suggest that small amounts of disturbance to crucial winter/yearlong range may play a smaller role in population trends than what is suggested in the CD/WI DEIS.
It should also be noted that as part of the Wildlife Monitoring and Protection Plan there will be the continued evaluation of disturbance within crucial winter range and monitoring data collected on herd population trends.

Section 4.2.3.2 Birds
Additional Potential BLM-Required Mitigation
This section identifies that, "for pits that contain oil or other potentially toxic substances, pit reservation would begin immediately (i.e. within 15 days) after cessation of drilling and testing activities; or pits would be netted." Amoco Production Company has no problems with the netting and fencing of reserve pits that environmentally contain hazardous materials. Amoco is however concerned with the associated hand-filling of reserve pits until those pits are allowed to completely dry by evaporation. The restriction of "squeezing" reserve pits before being allowed to fully dry would increase the potential for reserve pit leaking reclamation and the need to re-construct and again reclaiming the reserve pit area. This duplication of reclamation efforts will greatly increase the site reclamation cost. Adequate netting and fencing will protect birds and other wildlife from a potentially harmful reserve pit.

This section, page 4-62, line 28, states that "Activities or surface disturbance may not be allowed within 0.25 mi. or greater distance of sage grouse lek centers (active or inactive) at any time, and all surface disturbance within 0.25 mi. would be avoided, where practical." Amoco does not understand the potential mitigation that indicates, activities or surface disturbance may not be allowed with 0.25 mi. or greater distance ?? If this is suggesting that the BLM would consider extending the 0.25 mi. buffer around both active and inactive sage grouse leks to some greater distance, Amoco requests that the BLM would state the suggested distance on sound data that could substantiate the greater distance. BLM is currently undertaking a study of sage grouse and until results of this analysis have concluded Amoco believes that it is premature to expand sage grouse lek protection buffers.

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Section 4.2.5 Federal Threatened and Endangered/State Sensitive Species
Additional Potential BLM-Required Mitigation

36 "Prairie dog colonies on the CD/WDPA may be avoided to minimize disturbance of these areas." May D-2.2 depicts the numerous well current and/or historic prairie dog colonies for the CD/WDPA. This map shows a fairly large number of sections that have or had identified prairie dog colonies and a number of these sections are in areas of high potential for natural gas resource. If operators were asked to avoid prairie dog colonies totally, the effect could be to remove large portions of some leaseholds from availability for development. Amoco will do its part to avoid this potentially sensitive T&E habitat where possible. But unless total avoidance is necessary to eliminate impact to a specific T&E species, this level of mitigation would seem unnecessary.

37 "In the event that bald eagle roosting areas are found on or adjacent to the CD/WDPA, the area may be closed to surface disturbing activity (e.g., construction , drilling) from November 1 through April 1." Amoco realizes that the possibility of finding long term roosting areas on or adjacent to the project area are unlikely due to the lack of preferred bald eagle roosting habitat. In any event, if an area is discovered Amoco would like to be able to consult with the BLM, WGFD, and USFWS to fairly define that area that would be closed during the period from November 1 through April 1.

Section 4.2.5.6 Cumulative Impacts
38 This section indicates, "In the absence of pre-disturbance surveys, T&E species could be adversely affected, and candidate species and species of special concern could be jeopardized." While Amoco agrees with the statement that the BLM has made regarding the "may affect" determination, Amoco does not believe that the cumulative effects from this project coupled with other projects within the cumulative impacts assessment area would result in a species 'jeopardy' determination. Amoco believes the BLM should not support a T&E jeopardy determination merely because pre-disturbance surveys were not performed prior to all surface disturbing activity in what is only a small part of these T&E species total geneticial habitat. Amoco believes the language in this section should be changed to reflect this comment.
Clearly the more important statement is the section of the text in, "Given the appropriate monitoring and mitigation measures for T&E species would be employed throughout regional development projects, it is anticipated that there would be no adverse cumulative effects to these species resulting from the implementation of the proposed project in combination with existing and potential future actions." Based on this BLM statement, additional potential BLM-required mitigation is not warranted.

Section 4.3 Cultural & Historical Resources
Section 4.3.1.2 Additional BLM-Required Mitigation is not warranted.

39 This section describes a process by which, "Class I and III inventories would be conducted prior to surface disturbance on federal lands and state and private lands affected by federal undertakings unless landowner denial for access is documented in writing." This section goes on to say, "Where landowners deny access, alternate cultural resource mitigation resolution methodologies may be applied or the development may be denied." It is Amoco's opinion that if the private landowner denies access to perform cultural and historic resource inventories, the operator should not bear the burden, nor does Amoco believe the BLM has the right to deny a well/development approval. The cultural resources that reside on the fee sections within the CD/WDPA are the property of the land owner. If the landowner does not want the BLM or the operator to inventory these resources this should not lead to a denial of the operators right to develop.
If the right to inventory is denied by a landowner the BLM should have no recourse but to approve the federal action portion of the site specific project proposal.

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40 This section also states, "Additionally, programmatic agreements and/or discovery plans may be required to be in place prior to approval of APD's or ROW applications in areas with high densities of cultural resource sites near the Haystacks." Amoco concurs with this proposed mitigation as long as constraints had the ability to participate and comment on the content of these plans and the plan preparation is done timely so as to not impact timing of development opportunities.

41 "The BLM may require Operators to have a qualified historian conduct an inventory of the Overland Trail, Evans' route of the Cherokee Trail, and/or Lincoln Highway across the CD/WII/A." If the operators intent is to avoid these historic trails and therefore the impact to the trails will be insignificant, I do see the need nor justification for performing a complete inventory of these trails within the CD/WII/A. Also, within the CD/WII/A oil and gas activity is only one of the many activities which could potentially be resulting in impact to the trail. It seems inappropriate to not only perform this inventory but if performed, placing 100% of the inventory burden on the oil and gas operators.

Section 4.4 Socioeconomic
It is stated clearly in this section of the document that the potential economic benefit of the project proposal on local, state, and federal governments is significant on a qualitative way. In a state in which the tax base continues to show decline it is imperative that the BLM recognize the financial commitment operations like Amoco are making in the state of Wyoming and what impact these financial commitments have on the state and local economies. Given this qualitative benefit is clear there should be no question that the EIS should be brought to a quick conclusion in a favorable decision document. This document should recognize not only the financial commitments operators are willing to make in the CD/WII/A but also the commitments that have been made by oil and gas operators to environmental stewardship. The financial gain coupled with the operators environmental commitments clearly demonstrates that the benefits of a prompt project proposal approval far outweigh the few EIS document predicated significant impacts.

42

Section 4.5 Land Use
Section 4.5.5.2 Additional Potential BLM-Required Mitigation
This section states, "Additionally, all newly constructed roads on public lands not required for project operation and maintenance or existing areas will reclaimed, would be recontoured, reseeded, and permanently blocked, as deemed appropriate by the BLM." "Roads on private lands would be similarly treated, subject to landowner preference or agreement." Amoco Production supports the non-proliferation of separate and duplicate roadways within the CD/WII/A. These sentences pulled from the text of this section make little sense. If the road were kept open, construction it is difficult to believe that the roadway was necessary for some aspect of an operators or others operation. Also, if this mitigation suggestion is carried forward to the EIS ROD, it seems inappropriate to place 100% of the burden on oil and gas operators to reclaim roads that the BLM has identified as potentially duplicate roadway systems. If indeed the duplicate and unnecessary roadway was placed by an oil and gas operator Amoco would agree that the burden potentially be placed on the oil and gas operators. But, unless this is the case some efforts for cost sharing should be pursued by the BLM. Also, as long as the BLM recognizes it has not the authority to dictate activity on private lands and the stipulation needs to the reclamation of roads on these lands is truly with the landowner, Amoco has no problem with the language that has been proposed above.

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44 This section also proposes that, "Operators may be required to repair or replace fences and stable gards, grass, drift fences, and natural barriers to maintain current BLM standards." Amoco would agree with this proposed mitigation if the request is not unreasonable (or other than Amoco (or other O&G operator) action. This suggested mitigation would also be appropriate if it stated that the maintenance would be required for those items, (i.e. fences, cattle guards, gates etc.) which were place in the project area by Amoco or another operator.

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45 The section proposes, "Road signs on the CD/WII/A may require maintenance and monitoring as deemed appropriate by the BLM, and operators may be required to conduct all maintenance and monitoring operations to ensure that signs are in proper repair and placed in appropriate locations." Amoco would agree with this proposed mitigation for roads installed and maintained as a result of our operation. Amoco believes it is inappropriate and is concerned with the liability associated with this proposal on county, state, or BLM owned and maintained roads within the CD/WII/A.

46 Again, all aspects of the environmental analysis indicated impacts to land use and resources associated with land use issues, both cumulatively and from the project proposal alone, would be insignificant. Therefore, any additional potential BLM-required mitigation is unnecessary.

Section 4.6 Association and Visual Resources
Section 4.6.5.2 Additional Potential BLM-Required Mitigation
This section proposes, "During on-site reviews, the BLM and the operators would evaluate potential disturbances to visual resources and identify appropriate mitigation." "Appropriate mitigation may be required to minimize contrast within the CD/WII/A, making wells, roads, pipelines, and ancillary facilities less noticeable during the LOP." While Amoco is sensitive to the potential for visual impacts as a result of the proposed action, almost 98% of the CD/WII/A has been designated either VRM III or VRM IV which by definition allows for moderate to high alteration of the natural landscape character. Therefore, Amoco would agree to the application of the above mitigation in areas designated either VRM I or VRM II. Amoco does not believe that the level of proposed VRM protection, outlined in this section of the DEIS, is appropriate over the entire CD/WII/A. Amoco will always work with BLM in facility siting to minimize our impact to the visual landscape as long as the requests are reasonable and do not negatively impact Amoco's ability to access the mineral resource being pursued.

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Section 4.6.6 Cumulative Impacts
This section identifies the potential for significant impacts in the VRM II areas (2.1% of the CD/WII/PA) if 5 wells per section were drilled and developed in this VRM II designated area. While Amoco and the other operators felt it was us unclear for the potential of greater than 5 wells per section in the CD/WII EIS, it is unlikely that that level of development will occur in the portion of the project area natural gas resources. Therefore, the concern relative to impacts to the VRM II designated area is unlikely to occur. Likewise only 27 development is proposed to approach 5 wells per section should any additional mitigation be considered for implementation.

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Section 4.7 Hazardous Materials
4.7.5.2 Additional Potential BLM-Required Mitigation
This section suggests that the containment that is to be installed around facilities (i.e. storage tank batteries, dress sumps, trunnes, dehydrators, etc.) should all be surrounded by secondary means of containment. This section then goes on to state, "The appropriate containment and/or diversionary structures or equipment, including wells and flare, to prevent discharged fluid from reaching ground water, surface water, or navigable water, would be sufficiently impervious to any oil, glycol, produced water, or other fluid for 72 hours and would be constructed so that any discharge from a primary containment system, such as a tank or pipe, would not drain, infiltrate, or otherwise escape to ground water, surface water, or navigable waters before cleanup is completed." The requirements relative to secondary containment in the event of a release from primary containment it specifically addressed in 40 CFR 112 (Spill Prevention Control and Countermeasure) which Amoco understands and must comply with. The language suggested above is certainly more stringent that the existing SPCC regulations. SPCC regulations only apply to the containment of oil, which is clearly defined in the regulation. It does not apply to the containment in the

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event of a release of produced water, glycol, or other chemicals not specifically identified in the definition of oil in the regulation. The requirements for secondary containment, also as specified in the SPCC regulations, only apply if your oil storage is larger that 660 gallons for a single storage tank or in the case of a facility with multiple tanks an aggregate of 1,320 gallons of total storage capacity. Therefore pieces of equipment like separators and dehydrators may contain oil but not in quantities large enough for the SPCC regulation to apply. The primary objective of the SPCC regulation was to reduce the risk of oil from reaching navigable surface water. The objective is accomplished by using a diking material that would contain the lateral movement of oil in a very limited area near the storage tank. Amoco also believes that another important point that needs to be considered when determining if this proposed mitigation should be carried forward to the EIS ROD, is the probability and risk of a release of oil/condensate reaching ground water due to unimpeded vertical movement. The probability of a release being of significant magnitude to reach the deep ground water aquifers of the project areas high desert environment are slim fairly low. The operators propose and the regulations require compliance with SPCC. Compliance with these regulations coupled with the low probability of a condensate release reaching a ground water aquifer makes Amoco believe that the potential requirement for an impervious layer of materials under production related equipment is unnecessary and should not be carried forward to the EIS ROD. Amoco would concur with a risk based criteria that evaluates distance to surface water, depth to ground water etc. in making a decision regarding the placing of an impervious barrier under those pieces of equipment that have SPCC applicability (i.e. oil/condensate storage tanks with greater than 660 gallons of oil capacity).

Amoco Production Company appreciates the opportunity to provide comments on this Draft Environmental Impact Statement for the Continental Divide Wamsutter II Natural Gas Development Project. The following are quotes from the EIS documents Section 1.1 Purpose and Need. "Natural Gas is an integral part of the U.S. Energy future due to its availability and the presence of existing market delivery infrastructure." "By developing domestic reserves of clean-burning natural gas, the U.S. would reduce and maximize an adequate and stable supply of fuel to maintain economic well-being, industrial production, and national security." "The environmental advantages of burning natural gas are emphasized in the Clean Air Act amendments of 1990." This clearly describes, in very simple terms, the importance of this project proposal to not only those of us in the industry that may profit from this natural gas development but also to the country as a whole. Amoco would like to thank the members of the BLM IDT for their hard work and persistence in getting this document completed and available for public review. Amoco also hopes that continued persistence will bring prompt closure to this NEPA process and the BLM will authorize the Proposed Action - Full Field Development very soon in the Continental Divide/Wamsutter II EIS Record of Decision.

Sincerely,

Kirk M. Steinle

cc: Mr. Allen R. Pierson
Wyoming State Director
Bureau of Land Management Wyoming State Office
2353 Yellowstone Road
P.O. Box 1828
Cheyenne, Wyoming 82003-1828

7.2.80.2 Letter 80 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

Comment Response 1 - Comment noted.

Comment Response 2 - The BLM understands that if Alternative A or B are selected, considerable efforts would be required to quantify new and existing disturbance acreage.

Comment Response 3 - Please see FEIS Section 7.2.58.2, Comment Response 1.

Comment Response 4 - As clearly described in the DEIS (Section 4.1.1.6 Cumulative Impacts), "A conservative visibility screening level analysis indicated that proposed project operations might result in a perceptible (1.0 deciview) visibility reduction on very clear days at several of the PSD Class I and II sensitive receptors, therefore a more refined potential visibility impact analysis was performed."

The BLM conducted the very conservative, but much simpler, visibility screening analysis (method 2) to determine if potential visibility impacts within several sensitive receptors was possible. If no potential impacts were predicted using the very conservative method, then no further analysis was necessary. However, because the screening analysis did not preclude a potential for

significant adverse visibility impacts and based on the BLM's experience in predicting potential visibility impacts in this region for previous NEPA assessments, the more refined potential visibility impact analysis (method 4) was performed.

The visibility screening analysis (method 2) assumed the 20th percentile cleanest seasonal IMPROVE fine particulate matter data (based on two 24-hour duration samples each week, measured for several years at each site), when converted into reconstructed seasonal extinction values, would represent clear natural background visibility conditions, which could occur every day regardless of actual meteorological conditions. Although this is an "idealized representation" with "no physical reality," it is a simplifying assumption useful for screening purposes only. Please also see FEIS Section 7.2.93.2, Comment Response 2.

Comment Response 5 - You are correct that the visibility screening analysis (method 2) included both IMPROVE fine particulate matter data collected through 1997 and modeled potential air quality impacts from air pollutant emission sources existing prior to 1997. This does represent a "double counting impacts through modeling and background measurements." However, given the very conservative nature of the visibility screening analysis (method 2) and considering a more refined potential visibility impact analysis was performed, the over-estimate of potential visibility impacts due to "double counting" in the screening analysis is not significant.

Comment Response 6 - The original far-field emission inventory was developed for use in the refined visibility analysis (method 4), assuming that background visibility data were available for 1995. To be consistent with these background data, the emission inventory included sources permitted from June 1993 through April 1998. Sources that became operational prior to and during 1995 were then removed, or adjusted for startup time, in the final far-field modeling emission inventory.

Based on advisory stakeholder team comments, the BLM included the visibility screening analysis (method 2) in the final air quality impact assessment protocol. The intent of the visibility screening analysis was to perform a preliminary evaluation of potential visibility degradation from foreseeable source emissions, possibly eliminating the need for further refined analysis.

Since the background data used in the visibility screening analysis (method 2) included the period 1988-1998 (August), the emission source inventory should have begun 18 months prior to August 1998, or February 1, 1997. Therefore, emission sources that included in the far-field inventory which obtained construction permits prior to February 1, 1997, or that were operational before August 1998 did cause an overestimate of predicted impacts using the visibility screening analysis (method 2).

However, since the refined visibility analysis (method 4) excluded and/or adjusted the final far-field modeling emission inventory (based on actual 1995 optical measurements), "double counting" is not an issue in the refined visibility analysis (method 4).

Comment Response 7 - The Wyoming Interstate Company's Rawlins Station (WDEQ-AQD Permit # CT-1287) with nearly 250 tpy NO_x emissions should not have been included in the far-field impact analysis. Its NO_x emissions were subject to a WDEQ-AQD offset reduction with the Colorado Interstate Gas Company's Muddy Gap Station (WDEQ-AQD Permit # CT-1286), which is permitted at nearly 240 tpy NO_x emissions. The Rawlins Station should have been identified in the Air Quality Technical Support Document (Volume I - Appendix D: Emissions Inventory - Cumulative Emissions Sources, Table D-3, WDEQ Permitted Sources [Excluded]) and not included in the modeling analysis. By including both sources in the air quality impact analysis, their combined NO_x emissions were overestimated in the air quality impact assessment, further supporting the conclusion stated in the DEIS (Section 4.1.1.6 Cumulative Impacts) "the projected impacts represent an upper estimate of potential air quality impacts which are unlikely to actually be reached."

Comment Response 8 - The far-field analysis emissions inventories were developed for Wyoming and Colorado sources permitted between June 1993 and April 1998 and were determined to be non-operational prior to 1995. Sources that obtained WDEQ-AQD or CDPHE-APCD emission permits after April 1998 were not included in this modeling analysis. Please also see FEIS Section 7.2.91.2, Comment Response 22.

Comment Response 9 - As clearly stated in the DEIS (Section 4.1.1.6 Cumulative Impacts) "All existing background emission sources were assumed to operate at their existing emission rates continually (no reductions or closures) throughout the LOP [Life of Project]," and further concluding "Based on these numerous 'reasonable, but conservative' analysis assumptions, the projected impacts represent an upper estimate of potential air quality impacts which are unlikely to actually be reached." Please also see FEIS Section 7.2.91.2, Comment Response 13.

Comment Response 10 - The BLM believes that some additional mitigations may be required to ensure impacts are minimized. Final decision regarding the mitigative actions that would be required for this project will be identified in the ROD.

Comment Response 11 - Please refer to Comment Response 10, above.

Comment Response 12 - Please refer to Comment Response 10, above.

Comment Response 13 - Please refer to Comment Response 10, above.

Comment Response 14 - Please refer to Comment Response 10, above.

Comment Response 15 - Please refer to Comment Response 10, above.

Comment Response 16 - Please refer to Comment Response 10, above.

Comment Response 17 - Please refer to Comment Response 10, above.

Comment Response 18 - The phrase "where soils would not hold fluids" refers to soil permeability. CD/WIIPA soils are varied. Clay soils, due to their limited permeability, would in many cases not require reserve pit liners; however, in sandy soil areas and in other areas where soils are moderately to highly permeable reserve pit liners may be appropriate to prevent fluids from infiltration. Please also refer to Comment Response 10, above.

Comment Response 19 - Additional data on the functional condition of Antelope and Bitter Creeks are available for review at the RSFO. Please also refer to Comment Response 10, above.

Comment Response 20 - The potential requirement for water wells to be drilled to depths of greater than 1,000 ft may be applied to provide further assurance that surface waters, which may be in connection with shallow ground water, are protected from depletion. Please also refer to Comment Response 10, above.

Comment Response 21 - Please refer to Comment Response 10, above.

Comment Response 22 - Please refer to Comment Response 10, above.

Comment Response 23 - Please refer to Comment Response 10, above.

Comment Response 24 - Please refer to Comment Response 10, above.

Comment Response 25 - Please refer to Comment Response 10, above.

Comment Response 26 - The BLM understands that not all 33 proposed locations may be developed in the crucial winter/yearlong range for the Baggs muledeer herd; however, for the purpose of the EIS, area-specific disturbance estimates have been applied to provide the reviewer with a reasonable evaluation of the proposed development. The BLM does not think your requested change to the DEIS is necessary.

Comment Response 27 - Please refer to Comment Response 10, above.

Comment Response 28 - Comment noted.

Comment Response 29 - The BLM would not authorize "squeezing" of reserve pits.

Comment Response 30 - Comment noted. Please refer to Comment Response 10, above.

Comment Response 31 - Please refer to Comment Response 10, above.

Comment Response 32 - Comment noted. Please refer to Comment Response 10, above.

Comment Response 33 - Please refer to Comment Response 10, above.

Comment Response 34 - Please refer to Comment Response 10, above.

Comment Response 35 - Please refer to Comment Response 10, above.

Comment Response 36 - Comment noted.

Comment Response 37 - In the event that bald eagle roosting areas are discovered on the CD/WIIPA, the BLM would consult with both the Operators and USFWS prior to authorizing development activities in the vicinity of the roosting areas.

Comment Response 38 - The BLM does not believe changes to the DEIS are necessary. Please also refer to Comment Response 10, above.

Comment Response 39 - Comment noted.

Comment Response 40 - In the event that programmatic agreements or discovery plans are required, Operators would have the opportunity to participate in their preparation.

Comment Response 41 - Comment noted.

Comment Response 42 - Comment noted.

Comment Response 43 - Roads would be identified for reclamation utilizing the process as described in the Transportation Plan (see DEIS Appendix B) and associated transportation planning technical support documents (BLM 1999a). Newly constructed roads to well locations that prove to be uneconomic, may be considered unnecessary and reclaimed pursuant to the Reclamation Plan (see DEIS Appendix A).

Comment Response 44 - Comment noted.

Comment Response 45 - Comment noted.

Comment Response 46 - Please refer to Comment Response 10, above.

Comment Response 47 - Comment noted. Please refer to Comment Response 10, above.

Comment Response 48 - Comment noted. Please refer to Comment Response 10, above.

Comment Response 49 - Comment noted. Please refer to Comment Response 10, above.

7.2.81.1 Letter 81 - Kim Floyd, Wyoming Wildlife Federation

Working Today for Wildlife's Tomorrow!

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JUL 15 1999
BUREAU OF LAND MANAGEMENT
RAWLINS FIELD OFFICE

July 13, 1999

Clare Miller
Rawlins Field Office, BLM
P.O. Box 2407
Rawlins, WY 82301-2407

Dear Mr. Miller,

I am the Executive Director of the Wyoming Wildlife Federation (WWF). The Federation is a 501 (c) 3 nonprofit organization founded in 1977. We are the largest conservation organization in Wyoming with a membership consisting of nearly 6,500 citizens and families. The WWF works for hunters, anglers and other wildlife enthusiasts to protect and enhance habitat, to perpetuate quality hunting and fishing, to protect citizens' rights to use public lands and waters, and to promote ethical hunting and fishing. The WWF would like to submit the following comments on the DEIS for the Continental Divide/ Wamsutter II Natural Gas Project in Carbon and Sweetwater Counties in South Central Wyoming.

1 The Wyoming Wildlife Federation's members are dissatisfied with the piecemeal and inefficient method employed by the BLM in facilitizing the leasing and production of natural gas and oil from Wyoming's public domain. The method currently in use by the BLM enables private corporations to adversely impact public lands and waters and wildlife without federal and state agencies accurately assessing the cumulative impacts from those harmful actions, or compiling and implementing adequate reclamation, mitigation, and restoration programs for those affected resources.

2 We, as well as other conservation and advocacy organizations, have long implored the BLM to do adequate cumulative assessments on a regional level BEFORE allowing our public lands to be leased or explored or developed by industry. We also have long requested that, should development on public lands be determined to be in the public interest, incremental, staged, well-thought-out development be the methodology used rather than leasing, exploring, and developing widely scattered public lands across a broad region with little thought given to disturbing the smallest amount of land possible at any one time. Other paramount considerations of the BLM prior to giving approval for these egregious industrial projects, should be satisfying ONLY the production of the appropriate amount of hydrocarbons to supply the need of the American market, and with subsequent post-project reclamation of disturbed lands and waters and wildlife

3 4 be undertaken PRIOR to leasing or developing or harming further public lands or waters.

P.O. Box 106 • Cheyenne, Wyoming 82003 • Phone 307-637-5433 • Fax 307-637-6629
Wyoming Affiliate of the National Wildlife Federation

Letter 81, Kim Floyd, Wyoming Wildlife Federation, Page 2

5 Given the enormous scale of this project (Project Area = 1,061,200 acres; 3,000 wells plus roads, power lines, pipelines, dehydration facilities, etc, etc.), and the fact that the natural gas produced is not even currently needed in light of other projects and sources being available, it would be a good opportunity for the BLM to show down in natural-gas program and do the appropriate amount of analysis. This would allow other BLM projects to run their course and reclaim those lands and wildlife populations.

6 The WWF also recommends that the BLM, in this or any future project proposal, come forth with a "Conservation Alternative" in it's DEIS. It should include a recommendation for decreased density of well pads and other facilities on wildlife, recreational, or scenic-sensitive lands that do not, according to existing issues, completely prevent industrial structures or activity. Such lands would include antelope parturition areas, as-go grouse nesting and brood rearing areas, camping, hunting, and hiking areas, and established or historic wildlife migration routes.

7 The BLM should not give approval for this project without surveying historic and current pronghorn, elk, mule deer, and mountain lion migration routes through this proposed project area. The BLM should undertake the re-establishment of historic migration routes for wild ungulates between summer and winter ranges. Landscape-scale wild ungulate and large carnivore migration routes were, until a few short decades ago, typical of Wyoming's public lands. They have been adversely impacted, and are in danger of being lost entirely, due to increased livestock fencing, road building, industrial development and mismanagement on the part of federal and state resource management agencies. Migration of wildlife across the landscape is a definitive requirement of "wild" wildlife populations and its consideration should be included in this and any future federal actions affecting public resources.

8 A "Conservation Alternative" could also include the requirement by the BLM to cluster wells using slant-drilling technology. The absolute minimum of industrial facilities on all lands in the project area should be a stated objective in any project proposal by the BLM.

9 Not only the relatively undeveloped nature of some the project area's lands are in danger of being adversely affected by this proposal, but also the quality of the air in the entire region due to this and other industrial developments. The chemical and particulate matter likely to be generated by this proposed project would likely adversely impact Wyoming's air quality. Add rain or snow would result from chemical toxins generated by these industrial emissions which would solidify Wyoming's historically pure lakes, ponds, streams, and rivers. The Wind River Mountains and the Bridger Wilderness in northward from this project area and are a part of the nationally designated Class I airshed in western Wyoming. Since our membership values the fishing, hiking, photography, hunting, and sightseeing opportunities in western Wyoming, we strongly urge that NOTHING should be done in this project area that would adversely affect the water and visual purity in this region.

10 The WWF has special concern with the pending status of sage grouse in Wyoming. The possible listing of this species under the Endangered Species Act (ESA) warrants a cautious approach to development in the proposed area. The large number of leks within the project area boundary, as stated on map 4.7, gives us reason to be concerned. The data in Table 4.12, acreage of direct surface disturbance in sage grouse habitats, is very misleading. The information indicates that out of 571,000 acres of probable nesting area only 2.7% of potential sage nesting habitat will be impacted by this project. This 2.7% figure for nesting habitat is very low indeed. It is not within reason to believe that there are 571,000 acres of viable sage grouse nesting habitat within the

Letter 81, Kim Floyd, Wyoming Wildlife Federation, Page 3

10 project boundary. Livestock grazing and other activities in the project area limit sage grouse nesting. Well density and associated activities are important to consider and we feel that their importance was grossly underrated in the DEIS. We are concerned with increased noise levels which has proven to be detrimental to sage grouse populations and the further destruction and fragmentation of sage grouse habitat that will result from this proposed project. We ask the Bureau to reevaluate the potential impacts of the project on sage grouse.

11 The WWF also has concern with the pending status of the mountain plover. The mountain plover is being considered for listing as threatened by the USFWS as I write these comments. I found very little attention given to this species in the DEIS in light of the considerable amount of habitat found in the project area. Given these facts we urge the Bureau to address the impacts on this potential threatened species in more detail in the FEIS.

12 The scenic values of this vast area in southern Wyoming often receives little consideration by the BLM, yet Wyoming is one of the last areas in our country that has remnants of "What America Used To Be". Not all areas in our public domain can be Wilderness, yet many non-Wilderness areas have, again until recently, retained their "wild" nature due to an absence of industrial facilities. This proposed project area should not be developed without adequate consideration of the maintenance of those scenic areas.

13 Our members value their recreational opportunities on our public lands and waters. We feel that these opportunities to take our families hunting, camping, fishing, hiking, and exploring will be adversely impacted by this project. It would appear that the BLM has little concern for these often unquantifiable yet treasured values held by the American public, and that the BLM primarily serves the profit margin of multi-national corporations.

14 In light of these inadequately addressed concerns, we feel this project should be postponed or canceled, and that adequate analysis of the appropriateness of future industrial development on Wyoming's public lands be undertaken.

Sincerely,

Kim A. Floyd

Kim A. Floyd
Executive Director

7.2.81.2 Letter 81 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

Comment Response 1 - The BLM believes that the cumulative impact assessment presented in this EIS adequately presents the potential adverse effects associated with the proposed project in combination with existing and reasonably foreseeable developments. Furthermore, the reclamation, mitigation, and restoration actions that will be finalized in the ROD for this project would ensure that no unnecessary or undue impacts result from the Proposed Action or selected alternative. Refer to DEIS Section 1.2 for further detail on the multiple levels of impact analyses required for oil and gas development on federal lands.

Comment Response 2 - See Comment Response 1, above. Cumulative impact analyses are conducted prior to leasing during preparation of RMPs for each BLM Field Office (former resource areas). Furthermore, the BLM considered minimization of surface disturbance during preparation of this EIS, and further consideration of surface disturbance would be applied during the APD and ROW application processes. See also DEIS Section 2.5.

Comment Response 3 - The BLM is not responsible for determining when a proposed development activity is necessary.

Once lands are leased, the BLM lacks the authority to prohibit/substantially delay lease development. See also DEIS Section 2.5.

Comment Response 4 - Reclamation of disturbed areas occurs only after areas are no longer required for activities. The BLM is obligated under FLPMA to manage lands for multiple resources; therefore, there will be some trade-offs among resources and resource users. See also, Comment Response 3, above.

Comment Response 5 - See Comment Responses 3 and 4, above.

Comment Response 6 - Alternatives A and B, which limit development on federal lands in areas with sensitive resources, are analyzed in this EIS for many of the purposes you mention. Please note that changes have been made in this FEIS such that areas within a 2-mi radius of sage grouse leks are now considered SRAs.

Comment Response 7 - The BLM believes a survey of wildlife migration routes is unnecessary since much of this data is currently available from the WGFD and is presented in the DEIS (see Section 3.2.2.1). Furthermore, the BLM has no control over fences on private lands, there are no extensive fences proposed by this project, and there is no evidence that this project would block wildlife migration routes. See also DEIS Section 4.2.3.1.

Comment Response 8 - Directional drilling of multiple wells from one pad could occur under any alternative, and the BLM would not authorize unnecessary and undue actions. See also DEIS Section 2.5.

Comment Response 9 - Please see FEIS Section 7.2.84.2, Comment Response 27.

Comment Response 10 - There are an estimated 345,500 acres of probable sage grouse nesting habitat in the CD/WIIPA (see FEIS Table 3.14). The BLM believes that potential impacts to sage grouse are adequately addressed in the EIS. Sage grouse leks and the area within a 2-mi radius have been added to the list of sensitive resources in Alternatives A and B, and the BLM now believes that potentially significant adverse impacts could occur to sage grouse under the Proposed Action.

Comment Response 11 - Potential impacts to mountain plover are discussed in DEIS Sections 4.2.5 and E-5.2.6.

Comment Response 12 - Visual resource impacts are considered in detail in DEIS Section 4.6. Please note that the BLM now considers the potential for a change in landscape character to be a significant adverse impact.

Comment Response 13 - Comment noted. The BLM is concerned with all area resources and resource users and will manage resources in accordance with FLPMA directives.

Comment Response 14 - Comment noted. The BLM believes that potential project and cumulative impacts and associated mitigative actions are adequately analyzed in the EIS.

7.2.82.1 Letter 82 - David S. Petrie, Union Pacific Resources

Union Pacific Resources

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JUL 15 1999
BUREAU OF LAND MANAGEMENT
RAWLINS FIELD OFFICE

June 28, 1999

Clair Miller
Rawlins Field Office
Bureau of Land Management
P.O. Box 2407
Rawlins, WY 82301-2407

Re: Draft Environmental Impact Statement-Continental Divide/Wamsutter II Natural Gas Project

Dear Mr. Miller:

Union Pacific Resources (UPR) is pleased to submit for your review and consideration the following comments on the Continental Divide/Wamsutter II Natural Gas Project (CD/WIIPA Draft EIS) for inclusion into the Final EIS document and Record of Decision.

1 Union Pacific Resources supports the Proposed Action Alternative in this document on federal lands. UPR believes the continued environmentally sound extraction of clean burning natural gas is vital to our nation's air quality and to the reduction of dependence on oil and gas imports. UPR believes the BLM has not adequately addressed the above issues in this document, nor have they fully evaluated the economic benefit of this project on the local, county, state, and federal level. UPR believes the human environment continues to be evaluated in a subservient manner to other environmental issues. UPR requests that the BLM fully and completely evaluate and include in the final draft an in depth economic evaluation of the positive impacts of this project to the above governments and communities.

Union Pacific Resources recommends the following changes and provides the reasoning for the changes below each item.

Executive Summary

2 Page v
"Since over half of the CD/WIIPA is not federally owned and since the BLM would not deny access-"
The words would not should read can not.

Union Pacific Resources believes the BLM lacks the authority to deny access to private and/or state lands as referenced in the Wyoming BLM Instruction Memorandum No. WY-98-036 and BLM Manual 2800.06D, release 2-224.

P.O. Box 7 Fort Worth, Texas 76101-0007 (817) 321-6020

Letter 82 - David S. Petrie, Union Pacific Resources, Page 2

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Introduction

3 Page 1-9
"Based on long-term disturbance acreage required per well for the (CD/WIIPA) (2.77 acres) approximately 1655 wells would be authorized in the RFC-"
The words on federal lands should follow 1655 wells.

Union Pacific Resources believes the BLM can only authorize wells with federal involvement.

4 Page 1-9
"BLM has the authority to modify the siting and design of facilities, to control the rate of development and timing of activities, and to require other reasonable mitigation- (BLM Form 3100-11 and 43 C.F.R. 3101.1—2)"
The words on federal lands again should be added after the word facilities.

Union Pacific Resources believes there are many places the words on federal lands should be added. The BLM has stated in this document that they do not have authority over private lands, however throughout the document they infer that they do. UPR requests that the wording "on federal lands" be added as necessary to correct any misunderstanding by the general public to the BLM's authority.

5 Page 1-12
"Following exploration and confirmation drilling, the Operators generally know the approximate extent of drilling and surface disturbance that will be required to fully develop the field."

The word adequate should be added in front of confirmation.

Many times the BLM does not allow an adequate number of confirmation wells to truly determine the extent of the field and/or surface disturbance.

Proposed Action and Alternatives

6 Page 2-8
"Consistent with new development, a system/database for tallying new disturbance less reclaimed areas would be developed.

Union Pacific Resources believes this requirement is clearly the responsibility of the BLM and should be clearly stated within the above text.

7 Page 2-9
"BLM would not necessarily deny access to these lands,"

Should read BLM cannot deny access to these lands,

2

Letter 82 - David S. Petrie, Union Pacific Resources, Page 3

7 Union Pacific Resources believes the BLM is again trying to infer authority they do not have over private lands. This inference misleads the public as to the extent of BLM jurisdiction over private lands.

Environmental Consequences, Mitigation, and Monitoring

Page 4-1

"However, the BLM lacks authority to enforce these measures on private lands, and in absence of these mitigation measures, impacts to many CD/WIPA resources could be significant. Nonetheless, the Operators have committed to implementing the proposed project with public safety and environmental considerations throughout the CD/WIPA and for the LOP insofar as landowner preference and agreement allow."

8 Should read-

However, the BLM lacks authority to enforce these measures on private lands.

Union Pacific Resources, an operator and private surface/mineral owner in the area is unaware of any such Operator Agreement on private lands. Union Pacific Resources believes that any such agreement would be outside the scope of this document, as it does not apply to a federal action.

Page 4-3

Each Operator may be required to have an individual serve as Environmental Compliance Coordinator.

9 Should be removed-

Union Pacific Resources believes the BLM does not have the authority to require private companies or individuals to serve.

4.1.1.1 Proposed Action

"No violation of applicable state or federal air quality regulations of standards are expected to occur as a result of direct or indirect project-specific air pollutant emissions (including construction and operation)."

10 Union Pacific Resources believes the above statement along with a statement recognizing the State of Wyoming- Department of Air Quality as having the authority for air quality in conjunction with this project is sufficient.

Additional Potential BLM Required Mitigation

3

Letter 82 - David S. Petrie, Union Pacific Resources, Page 4

11 Although additional mitigation beyond the current "operator committed mitigation" is unnecessary, Union Pacific Resources believes the term "on federal lands" must be added to those applicable requirements.

12 It is important to note the determination of "no significant impacts" has been found for almost all resources. With site specific EA's to be done on each federal APD any potential "significant impact" will be avoided. Union Pacific Resources believes it is apparent additional mitigation is excessive and unnecessary.

13 Union Pacific Resources recommends the BLM approve the EIS Proposed Action with the current protections for all resources under the committed mitigation. Union Pacific Resources believes the final EIS and ROD should be completed as soon as possible to minimize the need to commence operations during the winter months. This timely action will minimize winter range exception requests and costly wintertime operations.

Union Pacific Resources appreciates this opportunity to comment on the proposed Draft Continental Divide/Wamsutter II EIS. If you should have any questions, please feel free to contact David Petrie at (817)-321-7664 or e-mail to DavidPetrie@uprr.com

Sincerely,

David S. Petrie
Manager Planning Regulatory Analyst

4

7.2.82.2 Letter 82 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

Comment Response 1 - The BLM believes socioeconomic and other beneficial impacts are adequately addressed in the DEIS. Please also see FEIS Section 7.2.86.2, Comment Response 2.

Comment Response 2 - Your comment is noted; however, the BLM believes that your requested text change is unnecessary. Please see DEIS Sections 2.4 and 2.5.

Comment Response 3 - RMP-identified reasonably foreseeable development accounts for all wells in the planning area (i.e., wells on both federal and non-federal lands). No EIS text changes have been made.

Comment Response 4 - The text has been changed to include the words "on federal mineral estate". See FEIS Section 1.2.5. The BLM understands that it has limited authority over private land development and believes the DEIS clearly points this out (see DEIS Sections 2.4 and 2.5).

Comment Response 5 - The text has been changed to include the words "adequate" prior to "confirmation". See FEIS Section 1.2.8.

Comment Response 6 - The text has been changed. See FEIS Section 2.2.

Comment Response 7 - The BLM believes the text is appropriate as written. No changes have been made. See Comment Response 4, above.

Comment Response 8 - The BLM believes the text is appropriate as written, and no changes have been made.

Comment Response 9 - The BLM believes the text is appropriate as written, and no changes have been made.

Comment Response 10 - Please refer to DEIS Section 4.1.1 and FEIS Section 7.2.58.2, Comment Response 1.

Comment Response 11 - Comment noted. See also Comment Response 4, above and FEIS Section 7.2.80.2, Comment Response 10.

Comment Response 12 - See FEIS Section 7.2.80.2, Comment Response 10.

Comment Response 13 - Comment noted.

7.2.83.1 Letter 83 - Oliver D. Ihasz

6/1/99

Oliver D. Ihasz
24 Dartmouth Drive
Deer Park, NY 11729
516 243-5082

Jerry Albertus, President
Ultra Petroleum
304 Inverness Way South
Englewood, Colorado 80112

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JUL 15 1999
BUREAU OF LAND MANAGEMENT
RAWLINS FIELD OFFICE

RE: GREEN RIVER BASIN, CONTINENTAL DIVIDE/WAMSUTTER II NATURAL GAS PROJECT, SWEETWATER AND CARBON COUNTIES, WYOMING.

Dear Jerry:

As a landowner in one of the prime areas of the CD/WI Natural Gas Project, I have been following the project development with great interest.

My property of 80 acres is just south of Wamsutter in Sweetwater County, bordering the Carbon County line. It is the South half of the Southeast one-quarter of Section 25, Township 17 North, Range 94 West, 6th Principal Meridian, Sweetwater County, Wyoming.

While I enjoy the beauty of our unspoiled wilderness lands, I also realize the need to rely more on a clean source of energy, natural gas. I am very much in favor of the Green River Basin, CD/WI Natural Gas Project. I sincerely hope that it receives the blessing of all the regulatory agencies involved and begins full-scale operation in the near future.

I invite all interested parties to consider the use of my land in this most significant project. Should you be interested in the property as a well site, a housing location for project personnel or purchasing it outright please let me know.

Should your company have an interest in my proposal, please contact me at my office address: Oliver D. Ihasz, Senior Vice President Absolute Return Advisers Ltd. Batternshire Building, Historic Route 7A-N, Manchester Center, Vermont 05255. Phone # 802 362-4320, Fax # 802 362-5274.

Thank you for your time and consideration. I wish you and your company great success in this most promising venture.

Sincerely,

Oliver D. Ihasz

7.2.84.1 Letter 84 - Carolyn Byrd and Jeff Kessler, Wyoming Outdoor Council

WYOMING OUTDOOR COUNCIL
262 Lincoln Street, Lander, Wyoming 82520
(307) 332-7031 — woc@wyoming.com

BY FAX 307-328-4224 AND
E-MAIL:rswire_wymail@blm.gov

July 15, 1999

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BUREAU OF LAND MANAGEMENT
RAWLINS FIELD OFFICE

Clare Miller
Rawlins Field Office
Bureau of Land Management
P.O. Box 2407
Rawlins, WY 82301-2407

RE: CONTINENTAL DIVIDE/WAMSUTTER II DEIS

Dear Clare:

The Wyoming Outdoor Council (WOC) and Biodiversity Associates appreciate this opportunity to comment on the Continental Divide/Wamsutter II Draft Environmental Impact Statement (DEIS). As you know, WOC has an ongoing interest in oil and gas development and its impacts in Southwest Wyoming. It is our position that the development of this resource should proceed in a manner that protects the surface resources of the public lands.

1 As we pointed out in our scoping comments, a project of this size (3,000 new wells on 3,000 locations, 1,500 miles of new roads, 1,200 miles of new pipelines, five compressor stations, a gas processing plant, ten evaporation ponds, five produced water disposal wells, 80 water wells, and all the associated human activity) will cause a multitude of negative environmental consequences, some of which are unavoidable. In many instances, however, certain kinds of impacts can be reduced or even eliminated by proper planning, thoughtfulness, and cooperation of the operators. Given the scale of this project and the natural resources at risk, we remind the BLM that, under the National Environmental Policy Act (NEPA), the BLM must fully analyze all the direct indirect and cumulative impacts of its decisions. The BLM must base its decisions on sound science and the best available information.

2 WOC is concerned that the BLM seems to believe that because of the checkerboard of land ownership and because of potential drainage of federal minerals, it has no other option than to allow full field development. We encourage the BLM to consider alternatives to immediate full field development, to assert its duties to analyze impacts on private land and to fully disclose the potential for drainage given the geology of the project area. WOC worries that the needs seemingly unstoppable development of Southwest Wyoming is occurring without full consideration of the long term cumulative and far reaching affects of industrialization, without adequate information concerning wildlife and other resources and without a creative consideration of how to effectively prevent irreparable damage to the area's wildlife, water and air quality, recreation opportunities and scenic values.

3 *Wyoming Conservation Action Since 1967*

o

7.2.83.2 Letter 83 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

Letter 84 - Carolyn Byrd and Jeff Kessler, Wyoming Outdoor Council, Page 2

THE BLM MUST PROTECT THE SURFACE RESOURCES OF THE PUBLIC LANDS.

Pursuant to the Federal Land Policy and Management Act (FLPMA), 43 U.S.C. §§ 1701 to 1784, the BLM must protect the public land. According to Section 1732(b)(emphasis added), "in managing the public lands the Secretary shall, by regulation or otherwise, take any action necessary to prevent unnecessary or undue degradation of the lands." Additionally, the BLM shall manage its resources under the principles of multiple use and sustained yield. 43 U.S.C. § 1732(a). FLPMA defines "multiple use" as the management of the public lands so:

> [B]est meet the present and future needs of the American people; making the most judicious use of the land for some or all of these resources or related services over areas large enough to provide sufficient latitude for periodic adjustments in use to conform to changing needs and conditions; the use of some land for less than all of the resources; a combination of balanced and diverse resource uses that takes into account the long-term needs of future generations for renewable and nonrenewable resources, including, but not limited to, recreation, range, timber, minerals, watershed, wildlife and fish, and natural scenic, scientific and historical values; and harmonious and coordinated management of the various resources without permanent impairment of the productivity of the land and the quality of the environment with consideration being given to the relative values of the resources and not necessarily to the combination of uses that will give the greatest economic return or the greatest unit output.

4 43 U.S.C. § 1702(c).

Following this direction, multiple use for the Continental Divide/Wamsutter II (CD/WII) area would imply planning and prefer natural gas development to "provide sufficient latitude for periodic adjustments in use to conform to changing needs and conditions." Especially given the extensive natural gas development throughout Southwest Wyoming, it is essential that the BLM provide "sufficient latitude" to ensure that industrial development does not overwhelm all the other resources. In other words, by committing vast stretches of Southwest Wyoming to industrialization, the BLM will not be able to provide for the long-term needs of future generations. Clearly, the American public has expressed a desire and need to sustain wildlife, clean water and air and the full range of recreation opportunities. The BLM must balance these needs with the development of natural gas in Southwest Wyoming. The BLM must not allow these irreplacable surface resources to be impaired or degraded to achieve the greatest economic return and unit output for the oil and gas operators.

More specifically, BLM's regulations detail the agency's responsibilities regarding oil and gas development. The regulations, at 43 C.F.R. § 3161.2, state (emphasis added):

Letter 84 - Carolyn Byrd and Jeff Kessler, Wyoming Outdoor Council, Page 3

The authorized officer is authorized and directed to approve . . . development or production of oil and gas. . . to require compliance with lease terms, with the regulations in this title and all other applicable regulations promulgated under the cited laws; and to require that all operations be conducted in a manner which protects other natural resources and the environmental quality, protects life and property and results in the maximum ultimate recovery of oil and gas with minimum waste and with minimum adverse effect on the ultimate recovery of other mineral resources. . . . Before approving operations on leasehold, the authorized officer shall determine that the lessee is in effect, that acceptable bond coverage has been provided and that the proposed plan of operations is sound both from a technical and environmental standpoint.

4

We understand industry's view that this rule requires maximum ultimate recovery. However, you cannot ignore the preceding phrase that requires protection of natural resources and environmental quality. The regulation clearly requires protection of the environment AND maximum ultimate recovery, thus, the duty to protect the environment is a precedent limitation on maximum ultimate recovery.

Even more specifically, the Standard Lease Terms at Section 6, state (emphasis added):

Lessee shall conduct operations in a manner that minimizes adverse impacts to the land, air, and water, to cultural, biological, visual, and other resources, and to other land users or users. . . . To the extent consistent with lease rights granted, such measures may include, but are not limited to, modification to siting or design of facilities, timing of operations, and specification of interim and final reclamation measures.

5

True, the BLM has ample authority to require oil and gas exploration and development to proceed only in a manner that protects all other natural resources and environmental quality. Moreover, regarding the protection on plant and animal species that are protected by, or may meet the protection of the Endangered Species Act, the BLM must take affirmative steps to protect these species. 16 U.S.C. § 1531(c). Because that the impacts of development on wildlife are largely unknown, the BLM should proceed with enough latitude in the pace and spacing of development to make adjustments to wildlife needs. Given this clear and simple authority to protect surface resources, and the importance and sensitivity of the resources in the CD/WI area, we ask that you re-examine the underlying premise that led you to commit to approving this project and reject consideration of fewer wells and phased development.

Letter 84 - Carolyn Byrd and Jeff Kessler, Wyoming Outdoor Council, Page 4

GIVEN THE BLM's OBLIGATIONS TO PROTECT SURFACE RESOURCES THE BLM SHOULD CONSIDER A NATURAL RESOURCE PROTECTION ALTERNATIVE.

Because we know that the CD/WI area contains crucial wildlife habitat including crucial winter range, raptor concentrations and potential threatened, endangered and sensitive (TES) habitat, and because the sage grouse is a sensitive species requiring special consideration and protection, the BLM must take a hard look at an alternative that emphasizes specific measures to protect the surface resources of the CD/WI area. In our scoping comments we asked the BLM to develop and analyze an alternative that would provide greater

6 protection for sensitive resources and values affected by impacts from natural gas development activities. Under this alternative BLM would prohibit, for example, development in virually sensitive areas (VSA) like in crucial big game winter range and birthing areas; within 1 mile of active raptor nests and sage grouse leks, breeding areas, and winter range within wetlands, riparian, and floodplains; on steep slopes and sensitive soils; within 1/2 mile of open water courses; in areas containing sensitive cultural resources or significant sites; in potential black-footed ferret habitat; in ACECs and WSAs; and within 1 mile of residences. We again ask for an alternative that includes this level of surface resource protection.

In Alternatives A and B, the DEIS does provide for protection of Sensitive Resource Areas (SRAs). However the DEIS does not clearly define SRAs. We know that SRAs include areas with established sand dunes, raptor nesting areas, crucial habitat, cultural resource sites, residential areas and Visual Resource

7 Areas. But what is the BLM's definition of crucial habitat? Are sage grouse leks and nesting areas included in SRAs? They should be. Map 2.3 delineates SRAs but does not identify why they are designated as SRAs. Are the SRAs large enough and contiguous enough to provide for and protect the sensitive resources they were delineated for?

The DEIS also confines its protection of SRAs to limits on disturbed acres. We believe that well densities and the wildlife habitat value of the acres to be disturbed must also be considered. Not every acre is of equal value to wildlife

8 and the BLM must ensure that it protects important wildlife habitat rather than merely limiting the number of acres that can be disturbed. Most troubling is the BLM's disclaimer that if drainage of federal gas reserves becomes an issue, all protective and reclamation requirements, including those for SRAs, may be waived.

In a conservation alternative, the BLM should consider concentrated

9 development facilities as a means to minimize surface impacts. By concentrating compressor stations and other gas related facilities in one location the impacts to the environment may be lessened.

Further, the BLM should consider alternatives to drilling additional wells to

10 prevent drainage of federal minerals. The EIS should analyze the option of monetary compensation for drainage rather than additional wells.

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11 For protection of sage grouse, the EIS should consider modifying livestock grazing practices to offset impacts to grouse from natural gas development.

A conservation alternative that includes measures to protect the unique wildlife, scenic, water and air quality and other resources of the CD/WI area is within

12 the BLM's jurisdiction and is eminently a reasonable alternative that must be considered under NEPA. It is reasonable because the BLM has a duty to protect the natural resources of its public lands and the CD/WI area contains outstanding and irreplacemble wildlife and other natural resources.

Even if the BLM is still concerned that it does not have the authority to impose environmental protection measures on leaseholders it nonetheless has the responsibility under NEPA to consider a conservation alternative in the EIS. Alternatives are the heart of an EIS. 40 C.F.R. § 1502.14. An EIS "should present the environmental impacts of the proposal and the alternatives in comparative form, thus sharply defining the issues and providing a clear basis for choice among options by the decisionmaker and the public." 40 C.F.R. § 1502.14. According to NEPA's regulations, the BLM shall "include reasonable alternatives not within the jurisdiction of the lead agency." The Council on Environmental Quality (CEQ) has further explained NEPA's requirement to consider reasonable alternatives. In number two of the 40 Most Asked Questions, 46 Fed. Reg. 18026 (1981), the CEQ states:

13

In determining the scope of alternatives to be considered, the emphasis is on what is "reasonable" rather than on whether the proponent or applicant likes or is itself capable of carrying out a particular alternative. Reasonable alternatives include those that are practical or feasible from the technical and economic standpoint and using common sense, rather than simply desirable from the standpoint of the applicant.

Number two of the 40 Questions continues, "[a]n alternative that is outside the legal jurisdiction of the lead agency must still be analyzed in the EIS if it is reasonable. A potential conflict with local or federal law does not necessarily render an alternative unreasonable, although such conflicts must be considered." Therefore, even if the law precluded BLM from limiting development, it should still consider in detail a conservation alternative.

Recently, the IBLA, in *Southern Utah Wilderness Alliance et al.*, 144 IBLA 70, supported the BLM in fully evaluating the impacts of oil and gas development on desert bighorn sheep even though the RMP and the lease did not even acknowledge the presence of the sheep. Further, the IBLA supported the BLM in providing protection for the sheep in order to "avoid unnecessary and undue degradation of the public lands." 144 IBLA at 74. In approving the APD for the well, the BLM attached conditions of approval that significantly expanded the protections afforded the sheep compared to the protections included in the RMP and lease.

14

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We ask the BLM to perform the same level of analysis and provide the appropriate levels of protection here. The BLM should fully analyze the impacts of oil and gas on all the surface resources of the CD/WI area, should fully consider a conservation alternative that incorporates a wide array of resource protective measures and the BLM should include stringent protection for the surface resources in approving any and all APDs.

THIS ACTION MUST COMPLY WITH THE RMP(s)

According to FLPMA, at 43 U.S.C. § 1732(a)(emphasis added):

The Secretary shall manage the public lands under principles of multiple use and sustained yield, in accordance with the land use plans developed by him under section 1712 of this title when they are available, except that where a tract of such public land has been dedicated to specific uses according to any other provisions of law it shall be managed in accordance with such law.

However, the CD/WI project does not comply with the applicable RMP(s). For example, this project will exceed the reasonably foreseeable development

15 estimate in the GDRA RMP. DEIS at 1-8. If the BLM approved the wells projected in this project, the number of wells in the RMP will be exceeded. And the DEIS is unclear on how many acres will be disturbed for each well under each alternative for how long, especially in Sensitive Resource Areas. Comparing page 1-8 to Table 2.2, the acres disturbed vary from 9 acres/well and 277 acres/well on page 1-8 to 9.9 acres/well to 59.6 acres/well in Table 2.2. It's difficult to determine how many acres will be disturbed for how long. Consequently, it is hard to understand how this project complies with the RMP. The DEIS also misrepresents the number of acres the will be disturbed by ancillary facilities. The sum of the acres should be 144 not 100 as represented by the DEIS. The EIS must clearly spell out how this project complies with all RMP requirements including spacing and acreage disturbed.

CUMULATIVE EFFECTS

As you know, WDC has long argued that the BLM should perform an EIS to analyze the cumulative effects of oil and gas development in Southwest Wyoming. This project is yet another example of why such a study is needed. The BLM does not have adequate data and has not performed adequate studies to understand the impacts of this project, let alone the impacts of all the

16 development projects in Southwest Wyoming. The information base on wildlife impacts is inadequate to develop a plan to assure the future viability of antelope, elk, sage grouse, mule deer, and other wildlife. We should understand the cumulative impacts to wildlife species such as the sage grouse before they get to the point where they require protection under the Endangered Species Act. We should understand the cumulative impacts to all natural resources before permitting several thousand more wells in the area.

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17 Regardless of the need for a region-wide assessment, the Final EIS should clearly identify the cumulative effects analysis area for each resource considered. For air quality, all existing, proposed, and reasonably foreseeable future emission sources in the Greater Green River Basin should be considered (please see our comments on air quality). For wildlife, the analysis should determine whether significance criteria established in previous EISs will be exceeded.

PRIVATE LANDS

18 Cumulative effects analysis may not be limited to public land; the BLM is obliged to analyze cumulative impacts of actions on private lands, and its effect on public resources. The EIS must analyze and disclose the effects of development of private lands in the area. NEPA regulations define "cumulative impact" as "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonable foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time." 40 C.F.R. § 1508.7.

We request that the EIS detail and analyze the effects of all other projects (BLM, other federal agencies, state, private, or otherwise) that would lead to cumulative effects in and around the analysis area. The EIS must consider past, present, and reasonable foreseeable future action on surrounding state and private lands.

19 For every issue presented in the DEIS, the BLM must consider the direct, indirect and cumulative impacts on private and non-public lands. This is particularly true for cumulative effects and species protected by the Endangered Species Act. The BLM should add extra protection for all surface resources on federal land given the effects of development on non-federal lands. Additionally, development on federal lands will encourage development on non-federal lands. The EIS must consider the effect of encouraging and facilitating development.

Similarly, the BLM must consider the impacts of granting rights of way through non-federal lands. The establishment of a ROW is a federal action significantly affecting the environment and is connected to the proposed project on federal land.

MONITORING AND MITIGATION PLANS ARE INADEQUATE

20 In the context of an EIS, an agency is required to discuss the extent to which adverse effects can be avoided by mitigation measures. "A mere listing of mitigation measures is insufficient to qualify as the reasoned discussion required by the NEPA." *Northwest Indian Cemetery Protective Assoc. v. Peterson*, 795 F.2d 688, 697 (9th Cir. 1986). Moreover, the adequacy of mitigation measures must be supported by substantial evidence and must have been found to be sufficiently supported when based on studies conducted by the agency. *National Audubon Society v. Hoffman*, 132 F.3d 7 (2d Cir. 1997).

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DRAINAGE

24 Much of the rationale for the numbers of wells for this project appears to be based on avoiding drainage of federal minerals from the non-federal lands. However, as we pointed out earlier, there are options to drilling additional wells to prevent drainage. The operators can pay the government for draining federal minerals. Additionally, the EIS should explain how the geology of the area affects drainage, i.e., is the an area of tight sands where each well drains a discreet small area? What are the situations where concerns about drainage will necessitate action on the part of BLM? Who owns the mineral rights under the adjoining private and state lands?

25 WOC is very troubled by the possibility, described in the DEIS, that reclamation requirements and mitigation measures would be disregarded if the BLM considered it necessary to protect federal gas reserves from drainage. How can the public rely on any of the proposed environmental protection measures if they can be so easily disposed of? Moreover, how can we know the true extent of the alternatives and mitigation measures if they are so flexible in response to drainage issues?

26 Surely, the public interest is better served by preserving the surface resources of this vast area than by garnering a few extra dollars and cubic feet of gas that may be lost to drainage. The public has shown its willingness time and time again to forego mineral extraction for the sake of environmental protection. If given the choice, WOC believes that the public would choose to preserve these areas. Consequently, the BLM should present an Alternative in which drainage is not a driving force and could not change the level of protection afforded surface resources.

AIR QUALITY

27 Emissions from oil and gas production and transmission activities are significant sources of atmospheric pollutants including NOx and VOCs such as benzene and toluene, known carcinogens. In southwestern Wyoming, emissions from oil and gas operations are causing or have the potential to cause solidification of sensitive alpine lakes and significant visibility impairment in nationally significant wilderness areas. Emissions from the Continental Divide/Wamsutter II gas development project will adversely impact air quality.

Cumulative Effects

28 While we appreciate the BLM's efforts to show the cumulative effects of the South Beggs and CD/WI projects on air quality, we would also like to know the specific air quality effects of CD/WI and South Beggs separately. Without the separation of the two projects we cannot determine how much of the impacts are attributable to each project. Additionally, the Pinedale Anticline natural gas development project, with 700 -1,000 projected wells, should be included in the cumulative effects analysis.

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20 Under NEPA the BLM must use the best available and current information in making resource management decisions. The Agency must have some value it is doing and must tell the public what it is doing. NEPA regulations require that public information be of "high quality" because "[a]ccurate scientific analysis, expert agency comments, and public scrutiny are essential to implementing a NEPA." *Idaho Sporting Congress v. Thomas*, 137 F.3d 1146 (9th Cir. 1998); 40 C.F.R. § 1500.1(b).

21 The monitoring plan outlined in the DEIS is not based on high quality accurate scientific analysis and is inadequate to support the proposed mitigation plan. The proposed monitoring is too little, too infrequently. For example, all wildlife populations must be monitored more frequently than every five years to determine impacts and trends. With inadequate monitoring, the effects of development will go unheeded and thus will not trigger mitigation.

22 The list of this project's potentially significant (Table 2.6) impacts is sobering. The BLM must have more information regarding wildlife in the CD/WI area before it can tailor monitoring and mitigation plans for this project. The plans must be able to withstand rigorous scientific scrutiny. Specifically the BLM needs more information of sage grouse, their numbers and distribution, coastal water range use, the presence of TES species and the cumulative effects of this and all the other proposed projects in the range of the species found in the CD/WI area. Additionally, the statement on page 4-97 that the BLM does not know what the cumulative impacts of habitat loss on big game will be but that through monitoring, the agency will determine if further studies and perhaps mitigation are needed, exactly describe the problem we raise here. The BLM must know and disclose what the effects will be and must plan for effective mitigation before making the decision to approve this project.

23 BLM's previous failures (e.g. SW Resources Evaluation; Pinnacle Infill "core issue", Jonah II wildlife considerations) to meet stated commitments for monitoring and mitigation laws us with little confidence that the proposed plans for CD/WI will be carried out. We are left with no guarantee that the mitigation measures specific to this project will be implemented. This is especially true and troubling given the DEIS's statements that mitigation measures will be abandoned in the face of drainage of federal gas reserves and in light of BLM's interpretation that mitigation can only be encouraged as voluntary actions by operators. As stated throughout the DEIS, the BLM may require mitigation which of course implies that it may not require mitigation. In general, mitigation is left up to the good will of the operators, hardly a situation that inspires confidence in the implementation and effectiveness of the proposed mitigation. WOC would like to see the BLM commit to verifying the implementation and effectiveness of all proposed mitigation. If the mitigation is either not being implemented or is not effective the BLM must either stop the damaging activity or require effective measures to prevent resource damage. Moreover, the BLM should make all monitoring and mitigation results available for public and independent scientific review

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29 WOC asks the BLM to include construction, flaring and blowdown emissions in the cumulative air quality analysis. These temporary emissions can have impacts on visibility and acidification of sensitive lakes. These emissions cannot be ignored in the cumulative analysis without misleading the public as to the real impacts of natural gas development.

Visibility Impacts

30 As you know, WOC has a long-standing interest in and concerns about the incremental effects of natural gas development in Southwest Wyoming on the protected air sheds of the surrounding mountains and Wilderness areas. According to the air quality analysis, the visibility impacts of this project and the South Beggs Natural Gas Development Project exceed the Limit of Acceptable Change established by the U.S. Forest Service. The limit will be exceeded on 8 days in the Bridger Wilderness, 7 days in the Popo Agie Wilderness, 6 days in the Mt. Zirkel Wilderness, 6 days in the Savage Run Wilderness (which is improperly described as a Class II area), 4 days in the Raweh Wilderness and 1 day in the Fitzpatrick Wilderness. Add these days to the impairment from the Jonah fields, the Pinedale Anticline, Stagecoach Draw, etc., and Wyoming risks losing its spectacular and world famous views. However, the DEIS downplays and ignores these results at the same time the BLM uses questionable methods to achieve these results.

31 Strikingly, the BLM used the level of concern of 1.0 deciview rather than the agreed upon Forest Service 1.5 deciview level of concern. The BLM must recalculate the level of impairment using the .5 deciview figure.

32 It is also disconcerting that the BLM shares industry's preferred method (Method 4) rather than sharing the Forest Service, National Park Service, EPA, BWADM and Wyoming DEQ's preferred method (Method 2). Not surprisingly, Method 4 results in the lowest end of impacts. How does the BLM support the statement that Method 4 is "more refined" and results in "more realistic estimates?" If this is the case, why do the other agencies prefer Method 2? And why would the BLM prefer a method that only uses one year of baseline visibility data versus a 5-year average? Surely a broader baseline is more supportable than one year of data? The BLM must reconsider the approach by combining the two models without disclosing their results separately and then choosing to display only the results from Method 4 that diminish the visibility impacts. We ask the BLM to use Method 2 for the Final EIS.

33 WOC also questions the BLM's rejection of the Mt. Zirkel visibility background data in favor of the Rocky Mountain National Park data. The visibility impacts should be re-assessed using Mt. Zirkel's background.

34 Given these problems with the air quality analysis for this project, the CD/WI protocols should not be used as standards and should not be followed in subsequent studies. Instead, we ask that the BLM re-do this analysis for the Final EIS and address our concerns listed above and any other concerns brought to the BLM's attention by other commentors. Moreover, because this project will result

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34 In impairment of Class I airsheds, the BLM must insure that adequate mitigation measures are in place to offset this degradation.

Specific Recommendations

35 • Ambient air quality stations should be installed in the project area near major sources of NOx, SO2 and VOCs. With such information, the BLM and Wyoming DEQ could determine whether emissions are meeting national and Wyoming ambient air quality standards. Without this information, all that is available are untested assumptions.

36 • Additional ambient air quality stations should be installed for hazardous air pollutants such as benzene, toluene, xylene, n-hexane, etc. Dehydrator units and condensate tanks are major sources of these hazardous air pollutants. Employees and the public should be made aware of the risk of exposure to HAPs.

37 • Permits and best available pollution control should be required on all sources of volatile organic compounds (VOC) and hazardous air pollutants (HAP), not merely those that emit in excess of 50 TPY VOC and 25 TPY HAP. The DEQ's existing policy exempting these smaller sources results in significant emissions that could easily be controlled by readily available pollution control technologies. It is possible and feasible to eliminate VOC and HAP emissions from oil and gas production operations.

WATER QUALITY

38 According to the DEIS, petroleum activities are the cause of stream impairment in the area. Yet, the BLM downplays and dismisses the proposed project's affects on water quality. If 720 gas wells, 1,500 miles of roads, 280 miles of pipeline right-of-way, and 800 acres of surface disturbance from gas related facilities have impaired streams, what will and additional 3,000 wells, 1,200 miles of roads and all the other associated developments do to the water quality?

39 The Final EIS should indicate existing and proposed water quality standards for each surface water proposed as a receiver of the produced water. The EIS should note that 1) Wyoming is in the process of revising its water quality standards (Water Quality Rules Chapter 1), and 2) that existing classifications are incorrect and illegal because they fail to protect existing and attainable uses and provide basic aquatic life protections. For example, all waters in the CD/WII area presently designated Class 4 are not attainable as a practical and legally required aquatic life criteria. All such waters must be protected at a minimum for aquatic life unless and until a use attainability analysis (approved by DEQ and EPA after a public hearing) demonstrates the use is not attainable.

40 The EIS should note that under EPA water quality regulations at 40 C.F.R. § 122.4(i), point source discharges are not authorized into "water quality limited segments" identified on the state's section 303(d) list. The BLM should insure that there will be no point source discharges into 303(d) waters as a result of this project.

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46 "optimal" not just "suitable" nesting habitat. Mitigation measure 13 seems to protect leks during breeding and nesting season for 2 miles. However, the mitigation only applies to "suitable sage grouse nesting habitat." How will the BLM determine suitable nesting habitat? And will it include grunting grounds? If ground disturbance is allowed within 2 miles of a lek, it will not longer be suitable, let alone optimal, nesting habitat.

47 Sage grouse studies do not support a 0.25-mile buffer zone free from surface disturbance, i.e. vegetation control. In fact, a BLM Technical Note (BLM, 1979; 24; 29) states:

> Habitat managers must recognize that some habitats are *significant and high quality for sage grouse and should be entirely excluded from vegetal control* programs . . . These include areas used for breeding and nesting, wintering ranges, cover adjacent to water courses . . . and other summering areas . . . The breeding complex (strutting grounds, or leks, and nesting areas) should be considered as all lands within a 2 mile (3 km) radius of an occupied lek (in some situations, depending on the quality of the nesting habitat, this radius may well exceed 2 miles). Control of vegetation within the breeding complex should not be undertaken within 2 miles of leks, or on nesting and brood areas.

The Wyoming Game and Fish Department, the agency from which BLM takes its primary direction in wildlife management, has published explicit sage grouse habitat management recommendations which recommend no vegetation control within 3 km of leks. The acknowledged expert on sage grouse, Clait E. Braun, of the Colorado Division of Wildlife has written that "the lek (strutting ground) is the hub of year-round activity . . . The breeding complex (leks and nesting areas) will be considered as all lands within a 3 km radius of an occupied lek . . . Control of vegetation within the breeding complex will not be undertaken within 3 km of leks, or on nesting and brood areas."

48 The BLM's .25 mi. buffer for surface disturbance is a plain violation of BLM's responsibility under 40 CFR § 1502.24 to "insure the professional integrity, including scientific integrity, of the discussions and analyses in environmental impact statements." BLM's .25 mile buffer is contrary to the clear weight of the scientific evidence and is arbitrary, capricious and contrary to law pursuant to the Administrative Procedure Act. *See Make Sperring Congress v. Thomas*, 129 F.3d 1146, 1151 (9th Cir. 1998) (absence of analytical data to support proposed mitigation measure violated NEPA's public disclosure requirements).

49 Additionally, the 2 miles surrounding leks should, at least, be considered as SRAs. More appropriately, the BLM should prohibit surface disturbance within 2 miles of a lek and should field survey each lek to determine where in fact the birds are nesting. It may well be that 2 miles is not enough and that further protection is warranted. The BLM should also consider sage grouse mitigation in addition to buffer zones such as modifying the noise of compressors, eliminating raptor perches and modifying livestock grazing.

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41 The BLM should insure that the project conforms to the Proposed Strategy for a Unified Watershed Approach to Federal land and Resource Management.

WILDLIFE

42 This project will have significant impacts on wildlife including big game and raptors. The loss of thousands of acres of crucial winter range is clearly significant. The impacts of this and surrounding projects are potentially degrading Southwest Wyoming's sagebrush ecosystem and all the species that rely on that system. If the sage grouse is any indication, which of course it is, our sagebrush steppe ecosystems are showing signs of failure. Restoration of sagebrush is notoriously difficult and may take many decades to achieve. Thus, this project may be a devastating blow to the sagebrush ecosystem in the area. The BLM has a duty to do all it can to prevent the continued degradation of this archetypal Western landscape.

43 As we emphasize throughout these comments, the BLM must have adequate, sound data and analyses before making such serious and potentially damaging decisions. The BLM must know what the impacts will be to all of the species found in the area including small mammals, reptiles, birds, fish and amphibians. The BLM should also consider the impacts to species potentially found in the area such as swift fox, black footed ferrets, elk, etc.

44 We encourage the BLM to follow the example of the Pinedale Anticline project and gather good baseline data before placing the area's wildlife in the midst of an industrial landscape. Along those lines, we believe that the limit of 85,000 per year for gaseous to contribute to further studies is remarkably inappropriate. Why limit the operator's contributions to determining and limiting their impacts to natural resources. What is the rationale and justification for such a limit?

Sage Grouse

45 Throughout its range in the West, the decline of sage grouse is occurring at an alarming rate. As the current sage grouse studies point consistently to the decline in numbers and distribution of sage grouse throughout its range, there is a real possibility that a petition to list the grouse under the Endangered Species Act will be submitted in the near future. Gas development including well-field roads, well pads and associated noise can easily cause abandonment of a sage grouse lek and its associated breeding grounds. Once a lek is abandoned, the sage grouse do not necessarily move—most likely they will simply perish.

46 As more wells, pipelines and other infrastructure are constructed without appropriate buffer zones, it will become more and more difficult to impose any necessary controls on a post-hoc basis.

The DEIS states that there are sixty-five sage grouse leks in the project area and designates an area within .25 mi. of a lek as "optimal sage grouse nesting habitat" and shut-offlimits to surface disturbance. DEIS at 2-67. However, the DEIS also acknowledges that grouse tend to nest in and use an area 2 miles around a lek. In fact, sage grouse studies show that the 2-mile radius provides

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50 Moreover, the BLM has a duty to know and disclose the effects of oil and gas development on sage grouse. Intuitively, it seems that gas development would significantly affect sage grouse breeding, nesting and chick rearing. The BLM should know exactly what the impacts of this development will be including the impacts of noise on sage grouse. The BLM should not permit 720 wells and 1,500 miles of new roads in the CD/WII area until it knows what the direct, indirect and cumulative impacts of this and all other development projects on sage grouse will be. Until that information is gathered the BLM cannot make a decision for this project.

Mountain Plover

51 Now that the U.S. Fish and Wildlife Service (FWS) has proposed the mountain plover for listing under the Endangered Species Act, the BLM must both confer with the FWS and use the current survey guidelines for mountain plovers. The timing of well pad preparation and subsequent drilling could greatly protect nesting plovers. Plovers drawn to the cleared off well pad as a nesting site should not be later threatened or destroyed by development activity. The BLM should fashion stringent protective measures for the plovers. The Final EIS must direct more attention to the impacts on plovers and how they will be protected.

Pronghorn and Mule Deer

52 WOC is very concerned about the loss of crucial big game winter range. Winter range is one of the most limiting factor for deer and antelope. The loss of crucial winter range will have long term devastating effects on wildlife. It's hard to believe the DEIS's conclusion that this project will result in no significant direct, indirect, or cumulative impacts. The BLM must support this statement with accurate, up-to-date data. Wildlife and hunting opportunities are valuable resources in the project area. The BLM should develop an alternative that protects crucial winter range.

53 The BLM should survey, map and analyze the fences in the project area to determine if fence removal could mitigate harm to the area's pronghorn and deer. The BLM should also study the impacts to ungulates of adding 1,500 miles of roads in the area.

Black Footed Ferret

54 The BLM should follow the FWS guidelines for Black Footed Ferret surveys. The BLM should survey all areas within half a mile of a prairie dog town for Black Footed Ferrets. Prairie dogs are widely distributed in the project area. As with the mountain plovers, the connections between ferrets and prairie dogs must be given adequate consideration in the Final EIS.

Birds

55 Pits should be netted or when possible contained in tanks. Flagging is ineffective to keep birds out of pits.

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CULTURAL RESOURCES

The BLM should initiate consultation and field trips with Native American Indians in order to identify and fashion protection for significant traditional cultural and spiritual sites in the project area. These sites must be protected from development impacts. Working with the tribes requires affirmative action on the part of BLM. Sending letters is not adequate to insure tribal participation in identifying and protecting cultural resources. The BLM should visit with the tribes, should arrange field trips including providing transportation and compensation. The BLM must not ignore its trust duties to the tribes and its duties under the National Historic Preservation Act. Please list in the EIS the specific steps that were taken to solicit the input of the Tribes.

56

TRANSPORTATION

We are pleased to see BLM focusing attention on transportation issues; we encourage implementation of the CERAC's recommendations. Analysis of transportation issues, including analysis of alternative travel corridors and road standards, should be integrated with the EIS. In light of the accelerated rate of new road development (1,500 miles) BLM should consider developing a "no net gain" policy for roads on public lands. Please refer to our previous letters regarding transportation planning. We ask that you incorporate all our previous comments into the public comment on the DEIS.

57

In sum, we urge the BLM to do all it can to protect the wildlife, water and air quality, scenic values and recreational opportunities in the CD/WI area. We ask the BLM to change its emphasis from encouraging and facilitating industrial development to stewarding our dwindling natural resources. The BLM has an opportunity and a duty to creatively tailor natural gas development in a manner that minimizes impacts to other resources. WOC asks that the BLM seize that opportunity rather than continuing with the business as usual "open for business" rubber stamp approach to mineral development. Thank you for considering our comments.

58

Sincerely,

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15 Wyoming Outdoor Council - Continental Divide/Wamsutter II DEIS Comments

7.2.84.2 Letter 84 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

Comment Response 1 - Comment noted.

Comment Response 2 - Comment noted.

Comment Response 3 - Comment noted. Three development alternatives and a No Action Alternative are analyzed in this EIS, and the BLM will select one of these alternatives in the ROD for this project. The BLM believes that this EIS fully considers cumulative effects and potential project mitigations (see DEIS Chapter 4.0).

Comment Response 4 - The BLM believes that adequate protection measures have been identified in the EIS to prevent unnecessary and undue degradation and to ensure natural resources and environmental quality would be protected for future generations. We appreciate your succinct discussion of BLM's responsibilities under FLPMA and Title 43 of the *Code of Federal Regulations*, and we believe that we have satisfied these responsibilities, as well as those of NEPA, in this EIS.

Comment Response 5 - The BLM believes that the measures proposed in the Wildlife Protection Plan and Biological Assessment (see DEIS Appendices D and E) are adequate for wildlife protection. Furthermore, this project under any alternative has not yet been approved; the ROD is the project authorizing document, and all required mitigations will be identified therein. Alternatives considering fewer wells and phased development were considered and rejected as indicated in DEIS Section 2.5.

Comment Response 6 - Alternatives A and B were developed to protect sensitive resources, and SRAs now include areas within 2.0 mi of sage grouse leks. However, the BLM cannot deny all development within the areas you have mentioned because leases have already been issued. Furthermore, we do not believe that such restrictions are necessary to give adequate protection to the various resources. Such restrictions would essentially create a no-surface-occupancy situation and preclude the recovery of the oil and gas resources.

Comment Response 7 - SRAs are defined in Section 2.2 of the DEIS. Sage grouse leks and a 2-mi buffer around them have been added to SRAs. The BLM believes that the SRAs are large enough and contiguous enough to protect the sensitive resources on federal lands. Crucial ranges are those defined as such by the WGFD and are generally crucial winter ranges for big game species.

Comment Response 8 - The BLM concurs that not all areas are of equal value to wildlife. That is why we have designated SRAs, which include some of the most important critical wildlife habitats (e.g., raptor nesting areas, sage grouse nesting areas, big game crucial winter ranges). While it is true that under a drainage situation the maximum disturbance acreage requirement may be temporarily exceeded, all other mitigation requirements would remain in force. Furthermore, if disturbance acreage requirements are exceeded, the BLM would require Operators to rectify the situation as soon as possible.

Comment Response 9 - Concentrated development facilities are a potential component of Alternatives A and B, where it may be used to minimize surface disturbance.

Comment Response 10 - As provided in existing leases, monetary compensation is an option; however, the BLM believes this situation would not occur.

Comment Response 11 - Comment noted. Grazing practices may be modified as deemed necessary by the BLM; however, these changes will be made outside of the planning process for this proposed project. Recommendations for modifications to grazing practices may be made during implementation of the Wildlife Protection Plan (see DEIS Appendix D).

Comment Response 12 - Alternatives A and B were developed for the purpose of giving additional protection to sensitive environmental resources. See also Comment Response 6, above.

Comment Response 13 - Please refer to Comment Responses 6 and 12, above. No development on some lands was considered and deemed to be unreasonable for the reasons discussed in Section 2.5 of the DEIS.

Comment Response 14 - The BLM believes that this EIS adequately discloses the potential impacts of the proposed project on all the surface resources of the CD/WIPA, fully considers a conservation alternative (Alternatives A and B) and includes appropriate protection/mitigation for the affected surface resources. Required resource protection measures will be identified in the ROD and further specified during subsequent APD and ROW application reviews.

Comment Response 15 - Disturbance acreage estimates are adequately presented in DEIS Table 2.1. The ROD for this project would not authorize development beyond that identified as reasonably foreseeable in the resource area RMPs (see DEIS Section 1.2.4 and the modifications presented in this FEIS).

The 144 acres mentioned was rounded down to 100 acres for ease of analysis. Had the disturbance acreage estimate been 151 acres, upward rounding would have occurred (i.e., 200 acres). In any event, the inclusion of an additional 44 acres would not result in any notable change to the impact analyses presented in this EIS.

Comment Response 16 - Comment noted. The BLM believes that cumulative impacts have been adequately addressed in this EIS. The results of the southwest Wyoming evaluation indicate that an EIS analyzing the cumulative impacts of oil and gas development in southwest Wyoming is unnecessary. See also Comment Responses 4, 5, and 15, above.

Comment Response 17 - As previously stated, BLM believes that the DEIS adequately addresses cumulative impacts. Air quality evaluations considered all existing, proposed, and reasonably foreseeable future emissions; significance criteria for wildlife are provided in DEIS Sections 4.2.3 and 4.2.5; and cumulative impact assessment areas are shown in DEIS Table 4.1 and Map 4.1.

The DEIS clearly described the proposed and reasonably foreseeable air pollutant emission sources included in the air quality impact assessment, identified potential cumulative air quality impacts, and listed analysis assumptions which "could lead to an under-estimation of potential impacts, but are beyond the scope of the cumulative air quality impact assessment for predicting reasonably foreseeable significant adverse effects on the human environment" (DEIS Section 4.1.1.6 Cumulative Impacts). In addition, the Air Quality Impact Assessment Technical Support Document provided maps of the cumulative air quality impact analysis area (including air pollutant source locations and sensitive air quality area boundaries) and a complete listing of all modeled air pollutant emission source locations and characteristics. Existing air pollutant emission sources were represented in the background air quality conditions, which are also described in the DEIS (Section 3.1.2 Air Quality).

Comment Response 18 - Impacts from all known private land developments as well as those from all known past, present, and reasonably foreseeable future actions are analyzed in this EIS.

Comment Response 19 - The DEIS considers all direct, indirect, and cumulative impacts for all affected resources on federal, state, and private lands and considers additional mitigations for federal lands. The BLM has considered the impacts of granting ROWs to access non-federal lands under the No Action Alternative.

Comment Response 20 - The BLM believes that the mitigation measures and associated plans are adequately presented in the DEIS.

Comment Response 21 - Not all resources are monitored every 5 years; rather, some are monitored on an annual basis (see DEIS Table D-2.2). The BLM believes the monitoring levels presented in the wildlife plan (DEIS Appendix D) are adequate for identifying potential problem areas.

Comment Response 22 - The BLM believes that sufficient information on wildlife and potential oil and gas development impacts are available to design a monitoring program. Mitigation measures may be modified based on the results of future wildlife monitoring. See also Comment Responses 5 and 21, above.

Comment Response 23 - The only thing that would be temporarily suspended under Alternatives A and B to protect federal gas reserves from drainage would be the requirement for specified limits on disturbed lands (see Comment Response 8, above). All other mitigations would remain in place. The wildlife protection plan (DEIS Appendix D) provides for an evaluation (through agency and public reviews) of the effectiveness of mitigation implementation, and additional mitigation may or may not be applied based on monitoring results. All monitoring results would be available for public review.

Comment Response 24 - The potential for drainage is described in DEIS Sections 2.4 and 2.5. Areas with the potential for drainage cannot be defined until development has occurred; however, in the event drainage is identified, the BLM would take immediate action. Multiple entities own the mineral rights on non-federal lands in the CD/WIPA; many are owned by the State of Wyoming and UPRC.

Comment Response 25 - Please refer to Comment Response 23, above.

Comment Response 26 - Drainage of federal reserves is not a "driving force," it is a consequence of development in an area of checkerboard landownership.

Comment Response 27 - As clearly stated in the DEIS (Executive Summary, Page vi), "Since BLM approved activities must comply with all applicable local, state, tribal, and federal air quality laws, statues, regulations, standards, and implementation plans, significant adverse impacts to air quality are not anticipated to occur from implementation of any of the alternative actions." The technical basis for this conclusion is presented in the DEIS (Section 4.1.1 Air Quality) and the Air Quality Impact Assessment Technical Support Document.

Comment Response 28 - Please see FEIS Section 7.2.79.2, Comment Responses 21 and 35.

Comment Response 29 - Temporary emissions during construction (well pad construction, drilling, completion/flaring, and pipeline construction) were analyzed as described in the Air Quality Impact Assessment Technical Support Document (Volume I - Emission Inventory and Near-Field Analysis). However, these temporary emissions were not included in the far-field air quality impact assessment because these emissions would not occur under the cumulative (operation) maximum emission scenario. The maximum emission scenario occurs when all wells are operating simultaneously and total field compression is at maximum levels. Since not all wells require maximum compression at production onset, the maximum total field compression would not occur until after construction activities are completed, several years after the last well goes into production.

Both the FEIS text (Section 4.1.1.1 Proposed Action) and the Revised Air Quality Impact Assessment Technical Support Document text (Volume I - 2.2 CD/WIIPA Production Emissions and 5.1.4 HAP Impacts) have been revised to clearly include potential well blowdown VOC emission impacts (including HAPs impacts). In addition, a calculation error regarding potential formaldehyde impacts reported in the DEIS is corrected in this FEIS. Although the potential 8-hour benzene and formaldehyde concentrations increased, there was no significant change in the incremental long-term cancer risk for a Most Likely Exposure and a Maximally Exposed Individual. No other 8-hour HAP concentrations exceeded the lower end of the states Acceptable Ambient Concentration Levels (AACL).

Comment Response 30 - The DEIS neither "downplays and ignores" the conservative visibility screening level analysis results, nor did the BLM use "questionable methods to achieve these results."

The BLM provided a detailed description of both the conservative screening analysis (method 2) and the more refined potential visibility impact analysis (method 4) techniques and results in the Air Quality Impact Assessment Technical Support Document (BLM 1999b) which was available to the general public upon request during the DEIS comment period. The BLM also compared both analyses' results to the 1.0 deciview "just noticeable change" significance threshold level and the USFS "½ of a just noticeable change" 0.5 deciview Limit of Acceptable Change. Please also see FEIS Section 7.2.79.2, Comment Response 2, and Section 7.2.93.2, Comment Response 2.

Comment Response 31 - The DEIS compared the potential visibility impact analysis results to both the 1.0 deciview "just noticeable change" significance threshold level and the USFS "½ of a just noticeable change" 0.5 deciview Limit of Acceptable Change. As clearly described in the DEIS text (Section 4.1.1.6 Cumulative Impacts), "In addition, the USFS, Regions 2 and 4 (Blett 1999), have also identified the following 'Limit of Acceptable Change' regarding potential significant visibility impacts for the PSD Class I and II sensitive areas analyzed: no day greater than 0.5 deciview, calculated on a 24-hour basis. Based on this more restrictive ½ of a 'just noticeable change' level, cumulative operations would exceed the USFS 'Limit of Acceptable Change' on a single day at both the PSD Class I Rawah Wilderness Area (1.69 deciview) and the PSD Class II Savage Run Wilderness Area (0.69 deciview). These predicted impacts would not occur from the project sources or the 'No Action' sources alone, but from all sources combined (total cumulative sources)." Please also see FEIS Section 7.2.79.2, Comment Response 3.

Comment Response 32 - All air quality impact assessment materials presented in the DEIS represent the BLM's "preferred method" of displaying the potential visibility degradation and not "industry's." Since method 2 is a very conservative, but much simpler, visibility screening analysis than the refined method 4, it is not surprising that method 4 predicts lower potential visibility impacts. Please also see FEIS Section 7.2.79.2, Comment Responses 3 and 6, and Section 7.2.93.2, Comment Response 2.

The BLM did use the very conservative, but much simpler, visibility screening analysis (method 2) to determine if potential visibility impacts within several sensitive receptors was possible. As clearly described in the DEIS text (Section 4.1.1.6 Cumulative Impacts), "A conservative visibility screening level analysis indicated that proposed project operations might result in a perceptible (1.0 deciview) visibility reduction on very clear days at several of the PSD Class I and II sensitive receptors, therefore a more refined potential visibility impact analysis was performed."

NEPA directs the BLM to "succinctly describe the environment of the area(s) to be affected" (40 C.F.R. 1502.15), to "provide full and fair discussion of [potential] significant environmental impacts" (40 C.F.R. 1502.1), and to "present the [potential] environmental impacts of the proposal and alternatives in comparative form, thus sharply defining the issues and providing a clear basis for choice among options by the decisionmaker and the public" (40 C.F.R. 1502.14).

The refined visibility impact analysis used hourly transmissometer optical monitoring data collected during 1995 at both the Bridger Wilderness Area and Rocky Mountain National Park mandatory federal PSD Class I areas in order to define existing background conditions. Since there are a number of "reasonably foreseeable" air pollutant emission sources which were not operating in 1995, their potential visibility impacts were analyzed to establish the future affected environment (adjusted background). Finally, potential visibility impacts from the Proposed Action and alternatives were combined with the adjusted background to fully disclose potential cumulative environmental impacts. Given the mixture of impacts from existing sources, "proposed, but not operating" reasonably foreseeable sources, and the Proposed Action and alternatives, the BLM could not use a 5-year average of measured optical conditions.

It is not clear why some agencies prefer to use the visibility screening analysis (method 2) as part of their PSD Permit - New Source Review, but that method: 1) is very easy to apply; 2) represents a conservative (over-estimate) of potential visibility impacts; 3) provides a conservative buffer against possible perceptible impacts; and 4) represents the desired future condition of no manmade visibility impairment in mandatory federal PSD Class I areas.

The DEIS did not confuse "the public by combining the two models without disclosing their results separately and then choosing to display only the results from method 4 that diminish the visibility impacts." Both the very conservative, but much simpler, visibility screening analysis (method 2) and the more refined visibility impact analysis (method 4) were performed and their results clearly reported separately in the DEIS.

However, your statements effectively demonstrate the general confusion among federal land management agencies and the general public regarding the different purposes and interpretation techniques of visibility impact analyses for air regulatory purposes (permit review) and non-regulatory potential environmental impact analysis and disclosure (NEPA review). For air pollutant emission permitting, very specific project design information, very specific air regulatory agency analysis procedures, and federal land management review and comment procedures have all been established (and must be followed) under the *Clean Air Act* and other applicable air quality regulatory directives. Once a permit is issued, the applicant has permission to operate. Under NEPA, project designs are often preliminary (enhancing a review of alternatives), the specific environmental impact analysis methods are selected based on the specific situation (although the overall analysis process is defined by NEPA), and although the decisionmaker may require specific mitigation measures, the applicant cannot operate until all applicable operating permits (including air quality) have been issued. In summary, both processes use similar analysis techniques (monitored data, dispersion modeling, etc.), but their purpose and needs vary greatly.

Comment Response 33 - Please see FEIS Section 7.2.79.2, Comment Response 44.

Comment Response 34 - Although not required by NEPA, the BLM chose to use an advisory stakeholder process when developing the Air Quality Impact Assessment Protocol (BLM 1998e) describing the methodology the BLM intended to use before conducting the air quality impact assessment. The sole purpose was to enhance "cooperation before the environmental impact statement is prepared, rather than submission of adversary comments on a completed document" consistent with NEPA regulations (40 C.F.R. 1500.5). However, the advisory stakeholder process does not in any way alter the BLM's authority and responsibility to conduct the air quality impact assessment consistent with existing NEPA regulations. When used, each air quality impact assessment protocol must be developed on a case-by-case basis, and no standard protocol is anticipated. Please also see FEIS Section 7.2.79.2, Comment Response 11, and Section 7.2.93.2, Comment Responses 4 and 6.

Comment Response 35 - To the extent that the "NEPA procedures must insure that environmental information is available to public officials and citizens before decisions are made and before actions are taken" (40 C.F.R. 1500.1(b)), the comment that "all that is available are untested assumptions" is correct. However, air pollutant emission limits and ambient air quality monitoring requirements are the responsibility of the applicable air quality regulatory agency, based on their air pollutant emission permit analysis and approval. The U.S. Congress did not grant any federal land management agency air quality regulatory authority. In fact, ever since the original *Clean Air Act* was passed (P.L. 159, dated July 14, 1955), it has been the declared policy of the U.S. Congress "to preserve and protect the primary responsibilities of the States [Tribal] and local governments in controlling air pollution." Please also see FEIS Section 7.2.79.2, Comment Response 1.

Comment Response 36 - As clearly stated in the DEIS text (Section 4.1.1.1 Proposed Action), "neither the State of Wyoming nor EPA have established HAP standards." Of six chemicals analyzed, only benzene and formaldehyde exceeded the most restrictive 8-hour Pinellas County Air Pollution Control Board (Florida) Acceptable Ambient Concentration Level. Further analysis of the potential incremental long-term cancer risk for a Most Likely Exposure and a Maximally Exposed Individual due to benzene and formaldehyde indicated no potential for concern. Please also see Comment Response 35, above.

Comment Response 37 - Please see Comment Response 35, above.

Comment Response 38 - Existing activities contributing to water quality reductions in the CD/WIIPA are described in DEIS Section 3.1.6.1. Petroleum activities are not identified as the only cause of stream impairment. Rather, a number of factors, including high natural erosion rates in this arid climate, combine to reduce water quality. The BLM believes that project-specific and cumulative impacts to water quality are adequately addressed in DEIS Section 4.1.7.

Comment Response 39 - No produced water currently is proposed to be discharged into surface waters. We recognize the evolution of water quality regulations and believe that adequate protection for surface waters are included in the DEIS and BLM standard operating procedures.

Comment Response 40 - While no point source discharges are anticipated at this time, your comment is noted, and the BLM concurs and would work with the WDEQ/WQD to ensure that no point source discharges are authorized to "water quality limited segments."

Comment Response 41 - The proposed project would be in compliance with all existing water quality standards (see DEIS Section 4.1.7).

Comment Response 42 - The BLM intends to do everything it can to mitigate the removal of sagebrush in the CD/WIIPA and to protect sage grouse and the other species that depend upon this ecosystem. Numerous mitigation measures are outlined in the DEIS to this end. However, just as protection of wildlife habitat is a legitimate use of BLM lands, so is oil and gas development.

Comment Response 43 - The DEIS discusses at length the impacts of the proposed project to wildlife species, especially those of most concern to man. These impacts and associated mitigations are presented in DEIS Sections 4.2.3 and 4.2.5 and Appendices D and E.

Comment Response 44 - Baseline wildlife studies were conducted on the CD/WIIPA, and an extensive review of extant data was completed. The BLM realizes that the landscape will change from its existing characteristics under oil and gas development, but to characterize such change as an "industrial landscape" is an overstatement. The obligation of no more than $5,000 per year by Operators is an applicant-committed practice, not a decision by BLM. Additional Operator-provided monies have also been identified (see DEIS Tables D-2.1, D-2.2, and D-2.3), and further monies may be required in the future based on impacts observed during monitoring.

Comment Response 45 - Comment noted.

Comment Response 46 - The BLM will identify suitable nesting habitat for sage grouse during the monitoring efforts identified in DEIS Appendix D, as well as during APD and ROW application reviews. Sage grouse leks and an area within a radius of 2-mi is given protection, and these probable nesting areas are now included in SRAs. The area within 0.25 mi of sage grouse leks is identified as potential breeding habitat.

Comment Response 47 - No vegetative control is proposed for the project. Some disturbance would occur, but vegetative control, when applied to sage grouse, generally means extensive chaining, burning, or chemical treatment of sagebrush. This could significantly affect sage grouse habitat; however, nothing like this is proposed for this project.

Comment Response 48 - The BLM does not believe that the 0.25-mi no surface occupancy buffer around sage grouse leks is in violation of 40 C.F.R. § 1502.24. This stipulation is quite different than the stipulation that restricts development in suitable nesting habitat within a 2-mi radius around a lek. The two stipulations work together to protect sage grouse during the breeding and nesting season.

Comment Response 49 - The 2-mi area surrounding sage grouse leks is now included in SRAs. Additional restrictions may be instituted based on the results of monitoring; however, at this time the BLM believes that the existing stipulations adequately protect sage grouse during breeding and nesting and that the application of additional restrictions at this time would be an unreasonable and unjustifiable burden. Additional sage grouse mitigations may be applied as described in DEIS Section 4.2.3.2, and further mitigations may be applied based on monitoring results.

Comment Response 50 - The BLM believes that the DEIS adequately addresses potential impacts on sage grouse and that an informed decision can be made. Where information is lacking, additional monitoring studies have been developed to gather more site-specific data. Furthermore, additional mitigations may be initiated based on monitoring results.

Comment Response 51 - The USFWS has been consulted regarding the proper procedures for clearances for mountain plover (see DEIS Appendix E), and this information has been incorporated into this FEIS.

Comment Response 52 - The BLM has not said that there would be no significant cumulative impacts to big game. In fact, the DEIS on page 4-58 says that there would be potential significant cumulative impacts to the Red Desert pronghorn herd under the Proposed Action. Alternatives A and B were designed, in part, to further protect crucial winter ranges.

Comment Response 53 - The BLM does not believe that a survey to identify all fences is necessary. The project does not propose building fences, and the WGFD is aware of problem fences, some of which may be on private lands over which the BLM has no authority. The DEIS already analyzes the impacts of roads on ungulates (see Section 4.2.3.1). Further information on this subject is provided in FEIS Section 7.2.88.

Comment Response 54 - The BLM does follow USFWS guidelines for black-footed ferret surveys (see DEIS Section 4.2.5.1).

Comment Response 55 - Comment noted.

Comment Response 56 - Consultation with Native American governmental bodies is required by several laws. Consultation is guided by BLM Manual Handbook H-8160-1, *General Procedural Guidance of Native American Consultation*. In Wyoming, the BLM views consultation with Native Americans as an ongoing process. The BLM has initiated consultation with the Eastern Shoshone, Northern Arapaho, and the Uintah and Ouray Bands of the Ute Tribe regarding the Continental Divide Wamsutter II project. Consultation efforts will continue at several levels throughout the LOP. Efforts will include general meetings where information is exchanged between the agency and tribes, as well as consultations and field visits when cultural resources of concern to tribes are encountered during the inventory phase of specific developments. The BLM will continue to take the concerns of tribal representatives into account in developing management strategies for the CD/WIIPA.

Comment Response 57 - The BLM considered all potential road impacts in this EIS. A "no net gain" policy for roads on public lands was not considered reasonable. The BLM considered all previous comments in this EIS, as well as in the development of the Transportation Plan (DEIS Appendix B). The general content of all scoping comments to this EIS are presented in DEIS Section 1.4.2.

Comment Response 58 - The BLM manages the public lands for multiple resources and believes that this EIS identifies that the use of the various resources can be balanced in a reasonable way.

7.2.85.1 Letter 85 - Jeff Kessler, Biodiversity Associates

Biodiversity Associates | Friends of the Bow
Working to Protect Native Species and Their Habitats
P.O. Box 6032, Laramie, WY 82073 (307) 742-7573 fax 742-7569

July 15, 1999

RECEIVED
JUL 19 '99
BUREAU OF LAND MANAGEMENT
RAWLINS FIELD OFFICE

Clara Miller
Rawlins Field Office, Bureau of Land Management
P.O. Box 2407
Rawlins, WY 82301-2407

RE: Continental Divide/Wamsutter II DEIS

Dear Clara:

These are additional comments of Biodiversity Associates on the Continental Divide/Wamsutter II Draft Environmental Impact Statement (DEIS). These comments supplement those submitted jointly by the Wyoming Outdoor Council and our group. Please include these comments in the public record and respond to our concerns in subsequent environmental documents.

General Concerns

1 First, we note that the comment period for this project was insufficient to allow the public at large, and the Wyoming public in particular, to analyze and evaluate the proposed action and alternatives in any level of detail. As you are aware, an enormous amount of environmentally damaging development is currently proposed for public lands across Wyoming. Literally thousands of oil or gas wells, coal bed methane wells, along with thousands of miles of road construction, are currently under discussion and open for public comment. The potential impacts from this level of development on wildlife, sensitive plant and animal species, the water and air resources, recreation, and the overall quality of life in Wyoming (including open space) are literally large. That is why our group and others in Wyoming asked for an extension of the public comment period for the DEIS. While the two week extension granted by the State Director was helpful, it was still insufficient time for citizens to come to grips with the mammoth proposal. Your letter of June 29 responding to our request for addition time to comment misconstrues the reasons we asked for the extension. We were not seeking additional "opportunities" for public input into the writing of the DEIS. Nor were we seeking additional venues for comment such as the "public meetings" you mentioned in your letter. Instead we were simply seeking more time to analyze the DEIS, a huge (yet incredibly incomplete) document which the BLM and consultants took 4 years to write. Furthermore, we are not swayed by your plea that there is a "need" to make a timely decision before years end. A few more weeks, or even a month later, would not significantly impact any of the parties involved in the project. The natural gas isn't going anywhere, the companies aren't going anywhere, and the BLM isn't going anywhere. On the other hand, the nation's natural heritage could be lost or forever diminished if the project is approved without adequate public scrutiny, without meaningful and enforceable environmental protection measures, or without full compliance with environmental protection laws and regulations.

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2 We are also concerned that the BLM fails in the DEIS to adequately portray the level of negative impacts to the environment. Many of the discussions in Section 4 consist of nothing but conclusory statements. There is an almost complete absence of actual analysis, data, or references to pertinent scientific studies. Of particular concern is the failure, as noted in the DEIS, to disclose how the general character of the study area might change. Instead, the DEIS in Table 2.6 states that the changes in character of the area will be "insignificant." This is patently untrue. Adding 3,000 wells, all the ancillary equipment, constructing 1,800 miles of roads and pipelines, and the related impacts from development will dramatically alter the character of the project area. To claim otherwise is preposterous. The BLM is using the same "head in the sand" approach here as it has in other areas of the state of Wyoming. Adding thousands of wells to a landscape and adding thousands of miles of roads will forever alter the character of the open spaces of Wyoming—turning the lands of areas that make Wyoming special (big open areas) into places just like everywhere else, full of roads, developments, motorized vehicles, air pollution, etc.

Put another way, the sagebrush ecosystem in particular has been and is being subjected to unprecedented levels of development. Indicators such as the Sage Grouse do not paint a pretty picture of the health of this ecosystem. The BLM should own-up to this and tell the public what is really going on.

Biodiversity, Wildlife, Plants, and Ecological Processes

The DEIS mentions a fair number of wildlife and plant species which are know to occur or which may occur in the project area. However, merely mentioning the species or seasons does not constitute the "hard look" required by the National Environmental Policy Act (NEPA). What it needed is an honest and forthright analysis of the impacts of the proposed development on the biological resources, whether to the project area, to the species, or to the habitats. The DEIS is either silent, merely draws conclusions in the absence of any compelling data, or defers any substantive analysis to some future date. This is particularly true for small mammals and other nongame/nonstatus animals. As but one example, the DEIS concludes that "Adequate undisturbed habitats are available regionally for all potentially affected state sensitive species." This is not analysis. The public deserves better from the BLM, and the BLM is required by law and regulation to do better.

3

In Chapter 4, and in Appendices D and E, the wildlife analysis consists mainly of arm-waving. For example, merely summing the area directly affected by habitat lost by new roads, pipelines, facilities, and well pads only tells a small part of the story. The DEIS repeatedly concludes that impacts to a given species will be "insignificant" because only a small percentage of habitat will be lost or impacted. With sensitive species, whether they are rare, declining, particularly sensitive to human disturbance or some combination of all three, very little loss of habitat can have a very large impact on local populations. This isn't a new concept, but you wouldn't know that by reading the DEIS. Given the expansive development that would occur in the project area, there is a great likelihood that the cumulative impacts to sensitive species would be far greater than that resulting from the direct loss of habitat alone. The spatial arrangement of disturbances, fragmentation of habitat, loss of effectiveness of habitat, creation of pathways for generalist species or additional predation (generalist raptors and the like) are also important factors. Again, the DEIS is silent on these issues for almost all species. The BLM has failed to use make use of the best available information and has failed to analyze the direct, indirect, and cumulative impacts of the alternatives on wildlife species and plants.

4

The general wildlife concerns mentioned above relate to all wildlife and rare plants, and to the particular species listed below. Concerns about these species should have been included in the DEIS. Likewise, the DEIS should have fully analyzed the impacts to these species from the various alternatives. It did not. Some of our specific concerns relating to a few individual species are

5

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mentioned below too. However, time does not permit us to go into great detail. These are just examples of our concerns and of potential impacts that have been ignored or presented erroneously in the DEIS.

Fringed myotis
Olive-backed pocket mouse (full species and caliatus subspecies)
Townsend's big-eared bat
Wyoming pocket gopher - This Wyoming endemic deserves special attention, as it occurs no where else.
Midget faded rattlesnake
Swift fox - This imperiled species has been thought to inhabit the project area in the past and deserves special attention. The potential for increased hunting and trapping access due to increased road access, recreational shooting, road kill, and other negative impacts should be addressed.
Black-footed ferret - We believe reintroduction efforts for this imperiled mammal are currently underway south of the project area in Colorado. The potential impacts to the reintroduction effort should be discussed.
White-tailed prairie dog - The Black-footed ferret reintroduction mentioned above depends on White-tailed prairie dog colonies. Potential impacts should have been included.
Mountain plover - Very few plovers remain in this country and it is essential that every possible precaution be taken to protect individuals, pairs, nests, and young. Because a relatively large area of land would be impacted (especially when blading the well pads, roads, etc.) we are concerned that existing nests could be disturbed by these activities, or that such areas would actually attract nesting pairs between the time the blading takes place and other activities begin. Mandatory mitigation measures should be added to prevent such situations. Furthermore, the plover has been proposed for listing under the federal Endangered Species Act. Thus the BLM should conferences with the USFWS and follow that agencies recommendations.

5

Sage Grouse - Sage grouse lek and nesting areas should have been included in the "sensitive resource areas." In addition, the cumulative loss of sage grouse nesting habitat will be significant, even though the DEIS reached the opposite conclusion. Recent research has shown that 70% or more of sage grouse hens abandon traditional nesting habitats within 2 miles of lein disturbed by gas activities. Taking this into consideration, it appears that most of the nesting effort would be impacted. The 0.25 mile buffer around leks is also much smaller than the 2 mile optimal nesting habitat shown in current research. Even a two mile buffer is not adequate in some instances. Nonetheless, the DEIS uses the 0.25 mile figure to estimate habitat figures. This is a gross underestimate. Map 3.13 bears this out.

Pronghorn - The loss of over 5% of crucial winter range for the Red Desert herd is anything but insignificant. Crucial range is just that, crucial. Losing 1/20th of it habitat is a significant impact and the DEIS should reflect this.

Colorado River cutthroat trout

Flannelmouth Sucker - This species has severely declined in its native range and is given a ranking of NSS1 by the Wyoming Game and Fish Department. This is the most imperiled ranking in the system. Flannelmouth sucker is known to be present in Bitter Creek downstream of the project area (see, for example, Wheeler, Chesley A., "Current Distributions and Distributional Changes of Fishes in Wyoming West of the Continental Divide," MS, University of Wyoming, Dept. of Zoology and Physiology, May, 1997). The DEIS should analyze potential impacts to this species from any produced waters, increased runoff from roads, potential spills, and any other factors that could be detrimental to the fish.

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We also note that, regardless of the current or ultimate WY Dept. of Environmental Quality classification of Bitter Creek, the existing use of Bitter Creek as habitat for Flannelmouth Sucker cannot be curtailed as a result of water quality reductions.

5

Other Concerns

6 We do not understand the concept of "applicant-committed" mitigation and protection measures. Are they mandatory or discretionary? If discretionary, at whose discretion? Are other mitigation and protective measures mandatory or discretionary?

The No-Action Alternative and Multiple Use

7 The DEIS fails to sincerely consider the no-action alternative. The "loss of royalties" argument presented in the DEIS conclude that no-action would be against the public's best interest because royalties would be foregone. Has the BLM conducted public opinion polls on the public's interest? Is the agency in possession of data demonstrating the public would rather gain royalties and lose the natural character of large expanses of the public lands? Or are the impacts to wildlife, and nonmonetized recreation judged by the public to be more valuable than any royalties? Again, the DEIS merely states conclusions without any supporting data or evidence.

We are also concerned that the BLM seems to believe that (1) energy negative environmental impact can be mitigated, and (2) that no areas should be off-limits to industrial gas exploration, development, and production. Contrary to this perspective, we would note that the public interest and the multiple use concept also include protection of our natural heritage, maintaining naturally functioning ecosystem, providing for healthy populations of all plant and animal species, and providing for a variety of recreation opportunities, including nonconsumptive primitive and semiprimitive recreation. Yet the philosophy embodied in the DEIS is that it is desired to maximize development everywhere, and any negative environmental impact is either insignificant or can be mitigated.

8

Conclusion

9 For all the reasons mentioned above, the DEIS is hastily fawed and should be redrafted, then circulated again for public comment.

Sincerely,

Jeff Kessler

7.2.85.2 Letter 85 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

Comment Response 1 - The BLM believes that the DEIS comment period was long enough to allow interested parties to participate, especially in light of the extensive public participation opportunities conducted throughout the entire EIS process.

Comment Response 2 - The BLM believes that the negative environmental impacts addressed in the DEIS were, for the most part, adequately portrayed; however, based on the comments received on the DEIS, the BLM has now determined that significant impacts to the character of some CD/WIIPA landscapes could occur, and the text in this FEIS has been changed to reflect this. Furthermore, the BLM does not anticipate these changes in landscape character to be permanent since most disturbed areas, including roads, would be adequately reclaimed after the LOP.

Comment Response 3 - The BLM believes that the statement regarding impacts for small mammals is adequate. No attempt has been made to hide impacts, and negative impacts are anticipated as discussed on DEIS page 4-53 and elsewhere in the document.

Comment Response 4 - Impacts to sensitive species are discussed in detail in DEIS Section 4.2.5, and the BLM believes that with the mitigations described in the DEIS no significant impacts would occur. The BLM is aware that factors other than disturbance acreage can affect the abundance of some species.

Comment Response 5 - The BLM believes these species are adequately addressed in this EIS. Information on these species can be found as follows.

- Fringed myotis. While this species is not known from the CD/WIIPA, if the species were to occur in this area impacts would likely be as described for other myotis species in DEIS Appendix E.
- Olive-backed pocket mouse. This species (including both subspecies) was considered along with other small mammals (see DEIS Sections 3.2.2.2 and 4.2.3.1).
- Townsend's big-eared bat. This special status species is addressed in DEIS Sections 3.2.4.1, 4.2.5, and E-5.1.4.
- Wyoming pocket gopher. This species was considered along with other small mammals (see DEIS Sections 3.2.2.2 and 4.2.3.1), as well as other state-sensitive species (see DEIS Sections 3.2.4.2 and 4.2.5).
- Midget faded rattlesnake. While this species is not known from the CD/WIIPA, if the species were to occur in the area impacts would likely be as described for other reptiles (see DEIS Section 4.2.3.3).
- Swift fox. This special status species is addressed in DEIS Sections 3.2.2.2, 3.2.4.2, 4.2.5, and E-5.1.7.
- Black-footed ferret. Considerable attention is given to this species throughout the DEIS (see Sections 3.2.4.1 and 4.2.5 and Appendix E). The BLM does not believe this project would have any impact on proposed black-footed ferret reintroduction efforts.
- White-tailed prairie dog. Impacts and mitigations for this species are given special attention throughout the DEIS (see Section 3.2.2.2 and Map 3.11, Sections 4.2.3.1 and 4.2.5.5, and Appendix E).
- Mountain plover. Considerable attention is given to this species throughout the DEIS (see Sections 3.2.4.1, 4.2.5, and E-5.2.6). Additional mitigation measures have been included in this FEIS (see Sections 2.6.13.9 and 4.2.5.5) to address your concerns regarding mountain plover nesting on newly disturbed areas. The BLM is conferencing with the USFWS regarding mountain plover and other listed species, and all required mitigative actions will be identified in the ROD for this project.
- Sage grouse. Sage grouse are addressed in DEIS Sections 3.2.2.4 and 4.2.3.2. The BLM is unaware of the publication mentioned; please provide a complete reference for this document. The 0.25-mi buffer around leks is provided primarily to protect breeding activities on leks; an additional seasonal 2.0-mi buffer is provided to protect nesting activities.
- Pronghorn. Pronghorn are addressed in DEIS Sections 3.2.2.1 and 4.2.3.1. The DEIS concurs that significant impacts may occur to the Red Desert pronghorn herd (see DEIS Sections 4.2.3.1, Cumulative Impacts, pages 4-57 and 4-58).
- Colorado River cutthroat trout. This species does not occur in the vicinity of the CD/WIIPA.
- Flannelmouth sucker. This species is adequately addressed in DEIS Sections 3.2.4.1, 4.2.5, and E-5.4.2.

Comment Response 6 - Applicant-committed mitigation is included as part of the Proposed Action and alternatives. Operators agree to these mitigation measures as part of their routine operations, and if authorized these measures would be adapted as requirements in the ROD.

Comment Response 7 - The BLM believes that the No Action Alternative is adequately discussed in the DEIS, and this alternative will be considered. While no public opinion polls were conducted, the BLM still believes, based in part on the comments received on the DEIS, that the loss of royalties associated with the No Action Alternative would not be in the public's best interest.

Comment Response 8 - The BLM does not believe that every negative environmental impact can be mitigated, although most can be minimized to prevent them from becoming significant. We do not believe that no areas should be off limits to oil and gas exploration, but we are legally bound to existing lease agreements and must honor the terms of such agreements. Areas are set aside from leasing during RMP development.

Comment Response 9 - The BLM believes that the DEIS provides adequate information and that it should not be reissued.

7.2.86.1 **Letter 86 - Marc W. Smith, Independent Petroleum Association of Mountain States**

IPAMS
Independent Petroleum Association of Mountain States

410 Denver Club Building • 518 17th Street • Denver, Colorado 80202-4137 • 303/623-0567 • Fax: 303/893-5789 • www.ipams.org

July 13, 1999

RECEIVED
JUL 19 1999
BUREAU OF LAND MANAGEMENT
RAWLINS FIELD OFFICE

Clair Miller
Rawlins Field Office
Bureau of Land Management
P.O. Box 2407
Rawlins, WY 82301-2407

RE: Draft Environmental Impact Statement
Continental Divide/Wamsutter II
Natural Gas Project

Dear Mr. Miller:

IPAMS is a non-profit, non-partisan trade association representing the interests of independent oil and natural gas producers, royalty owners, industry consultants, and service and supply companies operating in a thirteen-state Rocky Mountain area that includes the states of Wyoming, Colorado, New Mexico, Montana, Utah, Nebraska, North Dakota, South Dakota, Nevada, Arizona, Idaho, Washington, and Oregon.

IPAMS appreciates the opportunity to provide the following comments to those interested parties working on the effort to create a Draft Environmental Impact Statement (DEIS) for the Continental Divide/Wamsutter II (CDWII) Natural Gas Project.

IPAMS believes Proposed Action Alternative provides adequate protection of sensitive resource values while providing the most appropriate level of opportunity to explore and develop the mineral resources.

In addition the supporting the Proposed Action Alternative, IPAMS would make the following recommendations

1 1. IPAMS recommends that the social and economic analysis be given the same detailed and thoughtful review as has been given to aspects of the

The Independent Petroleum Association of Mountain States (IPAMS) is the regional trade association in the Rocky Mountains.
Our economic contributions rel ate among gas producers operating in a 13-state area in the West.

7.2.86.2 Letter 86 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

Comment Response 1 - The BLM believes social and economic issues have been adequately addressed in the DEIS and that the beneficial impacts to the communities and the nation are appropriately disclosed.

Comment Response 2 - The advantages of burning natural gas as emphasized in the *Clean Air Act* amendments of 1990 are stated in DEIS Section 1.1 (page 1-5).

Comment Response 3 - Please refer to FEIS Section 7.2.82.2, Comment Responses 3, 4, and 7.

Letter 86 - Marc W. Smith, Independent Petroleum Association of Mountain States, Page 2

IPAMS
Independent Petroleum Association of Mountain States

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affected environment. If such analysis were completed, it would be most evident that responsible oil and gas development supports the goals and interests of the community and nation.

2 2. IPAMS recommends that analysis of affected environment include the beneficial outcomes that will be achieved by developing oil and gas from this basin. For starters, some mention should be made about the importance of developing this field as part of the national strategy for clean air. Although, this analysis may seem outside the immediate concern of this project, there will be very important gains in air quality as a result of having more natural gas available for newer, cleaner burning power plants using this fuel. This fact should not be overlooked. It is worth noting for public awareness and it is a fact we should all be proud of.

3 3. IPAMS final recommendation relates to more clearly distinguishing between land, for which the BLM does and does not have authority over. Throughout the document, there is language which seems to extend the federal government's authority to regulate oil and gas development on private land. Needless to say, this portrayal of federal control does not accurately disclose to the public the limits to federal authority over private lands. IPAMS recommends that those sections, which infer authority where no authority in fact exists, be cleaned-up in order to avoid misleading the public at-large.

In closing, IPAMS would encourage the BLM to move speedily to release the FEIS and ROD that approves the Proposed Action Alternative. IPAMS appreciates the opportunity to provide these comments.

Sincerely,

Marc W. Smith
Director of Lands and Environment

7.2.87.1 **Letter 87 - Conrad A. Lass, Office of Federal Land Policy, State of Wyoming**

Office of Federal Land Policy

122 West 25th Street • Herschler Bldg., 3 West • Cheyenne, WY 82002-0600 • 307-777-7331 • 307-777-5400 fax

July 15, 1999

RECEIVED
JUL 19 1999
BUREAU OF LAND MANAGEMENT
RAWLINS FIELD OFFICE

Clare Miller
Rawlins Field Office
Bureau of Land Management
PO Box 2407
Rawlins, WY 82301-2407

RE: Draft Environmental Impact Statement, Continental Divide/Wamsutter II Natural Gas Project

Dear Mr. Miller:

The Office of Federal Land Policy has reviewed the referenced document on behalf of the State of Wyoming. Copies of the draft environmental impact statement were also provided to all affected State agencies for their review, in accordance with State Clearinghouse procedures. Attached are letters from the Wyoming Game & Fish Department, State Engineer's Office, Wyoming Geological Survey, and Wyoming Department of Environmental Quality-Air Quality Division, resulting from their reviews.

1 The State of Wyoming supports the orderly and responsible development of our natural resources, as minerals are a key component of the economic base of the State of Wyoming. Marathon Oil Company's projection of production in excess of 600,000mcf/d in the peak year of this development is an indication of the promise this area holds for residents of both the State of Wyoming and the U.S.

2 However, this promise could be delayed by time-consuming appeals or litigation if the EIS is not an adequate disclosure document. In an effort to help prevent those delays, the State believes this document needs to be updated on several issues prior to publication of the FEIS.

3 While little coal bed methane (CBM) activity was anticipated in this area when these projects were initially planned, CBM interest in this area is now prevalent. At least 60 CBM wells are planned by the end of 2000, and it is unlikely that CBM development will stop there. Thus, extensive CBM development is now in the "reasonably foreseeable future." The issues related to CBM development over the life of the project (LOP) need to be addressed prior to the release of the final impact analysis.

4 On a similar note, the impacts of this natural gas development (and potential CBM development) on potential coal development in the area should be addressed in this analysis.

Letter 87 - Conrad A. Lass, Office of Federal Land Policy, State of Wyoming, Page 2

Clare Miller
Continental Divide/Wamsutter II DEIS
Page 2

4 Black Butte has six opened-but-idled mines near the CD/WII project area, waiting to begin producing should coal markets improve. It is unclear what impact this development and CBM activity will have on air quality permits for those coal mines, particularly in light of the newly-proposed Regional Haze rules.

5 Landslide and other geologic information and several production assumptions and omissions should be addressed, per comments in the State Geologist's letter.

The Air Quality Division of the Wyoming Department of Environmental Quality (DEQ) notes that the Savage Run Wilderness Area is legally required to be managed as a PSD Class I Area, even though it is not a federally-designated Class I area. Language throughout the DEIS needs to note the legal designation, and explain the distinction between State and Federal designation. Any air quality predictions based on that area's designation may have to be revised, as well. We also ask that the document explain carefully that the Forest Service's Limits of Acceptable Change values are not regulatory limits or standards.

Wyoming Air Quality Standards and Regulations were revised in 1998 to comply with federal ozone standards. Wyoming now uses an 8-hour ozone standard of 160 $\mu g/m^3$.

6 We wish to highlight the fact that the Air Quality Technical Support Document Volume II references the Southwest Wyoming Technical Air Forum (SWWYTAF) information and modeling techniques. That information and modeling have not been finalized, nor has the Wyoming Department of Environmental Quality authorized the release of such information for use in the Continental Divide/Wamsutter II EIS. Either this statement is incorrect or that information has been inappropriately utilized.

The DEQ comments detail air quality-related statements in the DEIS which need to be substantiated. Additionally, they bring up several modeling questions. Those questions would have been best handled in air quality stakeholder protocol meetings during development of this document, but will now have to be dealt with in this public forum.

7 Sage grouse leks and associated nesting habitats are not included in the definitions of "sensitive species." Since a petition requesting ESA status for the sage grouse is anticipated within the next few months, failure to analyze impacts on sage grouse and to detail appropriate mitigation could delay project development. The same is true for the potential impacts and mitigation for mountain plover, which has already been petitioned for listing. We suggest that BLM personnel work closely with Game & Fish personnel to alleviate these concerns.

8 While we support development of this natural gas field, we are equally responsible for protecting Wyoming's natural resources. Thus, the implications that reclamation requirements in Alternatives A & B would be disregarded should potential drainage issues arise, is troublesome. Not only does it essentially eliminate alternatives A and B from serious consideration (which, in turn, essentially voids the range of alternatives), but that statement

Letter 87 - Conrad A. Lass, Office of Federal Land Policy, State of Wyoming, Page 3

Clare Miller
Continental Divide/Wamsutter II DEIS
Page 3

8 together with an apparent lack of commitment to mitigation and an inadequate monitoring plan raise concern about BLM's regard for the State's resources.

9 Of equal concern is access to and drainage of State minerals. Much of the State minerals in this project area lie under federal surface. State mineral lessees have reported being denied access to overlying federal land. The State has had to extend leases because of that denied access. We see nothing in this document which would lead us to believe that BLM will consider the State's need to develop its mineral resources. In fact, the implications in this document are that BLM does not intend to work as partners with the State in developing the State's resources.

10 In addition to the updates and omissions noted above, agencies have provided corrections to information presented in the DEIS for your use in preparing the Final EIS as accurately as possible. Please read their letters carefully, and incorporate the appropriate corrections in the EIS.

11 While the State certainly supports development of this natural gas field, we must uphold our responsibilities to both develop the State's resources in a timely manner, and to develop those resources in an environmentally-responsible manner. The State appreciates your taking into account the concerns and recommendations outlined in this letter. We would also like to point out that the last sentence of the first full paragraph in column two on page v is incorrect. The State of Wyoming has no land use plan.

The State appreciates the notation that the Wyoming Oil and Gas Conservation Commission regulates spacing.

12 The Office of Federal Land Policy will need six copies of future information and documents regarding this project for distribution to affected State agencies. Existing Memoranda of Understanding and other working agreements with individual agencies remain in place and unaffected. Position and policy statements will be forwarded to you by this Office.

Thank you for the opportunity to comment on this important activity. If I can be of any assistance, please do not hesitate to contact me.

Sincerely,

Conrad A. Lass
Director

Enclosures (4)

7.2.87.2 Letter 87 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

Comment Response 1 - Comment noted.

Comment Response 2 - The BLM believes the DEIS adequately disclosed the nature of the proposed project and associated impacts. Changes have been made in this FEIS where public comment on the DEIS revealed a need and the BLM concurred with the commentor.

Comment Response 3 - The BLM is aware of the recently proposed coal bed methane development; however, the BLM believes that the DEIS adequately accounts for these new developments as reasonably foreseeable components in the cumulative impact assessment (see DEIS Table 4.2, footnote 12). In the event coal bed methane proposals become better defined, the BLM would initiate appropriate NEPA analyses for these projects, and when appropriate, the cumulative impact analyses for these coal bed methane proposals would include impacts from this proposed project.

Comment Response 4 - As stated in DEIS Section 4.1.3.1, no coal mining occurs in the CD/WIIPA and it is unlikely that mining in the area would occur during the LOP. Where coal mining occurs within the cumulative impact assessment areas for this project, firm future coal mining actions are included in the impact assessments (see DEIS Table 4.2, footnote 9). Coal mine emission sources and their effects on AQRVs were included in the far-field air quality impact assessment (BLM 1999b, Appendix A, Table A-2).

Comment Response 5 - Please refer to Section 7.2.90 in this FEIS.

Comment Response 6 - Please refer to Section 7.2.91 in this FEIS.

Comment Response 7 - Sage grouse leks and associated probable nesting habitat are now included as SRAs. Mountain plover habitats would be protected as indicated in DEIS Section E-5.2.6.3. The BLM will coordinate closely with the WGFD to ensure appropriate wildlife protection.

Comment Response 8 - The BLM did not mean to imply that reclamation requirements would be disregarded should potential drainage issues arise. Rather, some of the requirements for the ceiling on acres of disturbed lands under Alternatives A and B may be temporarily suspended. In the event that disturbance acreage ceilings are exceeded due to drainage drilling, the BLM would require reclamation to proceed as soon as possible to bring these areas into compliance. The BLM remains committed to adequate reclamation of all disturbed lands under its jurisdiction.

Comment Response 9 - The BLM will continue to work with the State of Wyoming in development of minerals on joint estate lands. We did not mean to imply otherwise.

Comment Response 10 - Please refer to FEIS Sections 7.2.88 through 7.2.91, for responses to other state agency concerns.

Comment Response 11 - Since no other formal state planning document is available, the BLM has considered the *State of Wyoming Land Use Plan* (Wyoming State Land Commission 1979) as the State of Wyoming's formal planning document. Please let us know if you would prefer that we not use this document for future NEPA analyses.

Comment Response 12 - Six copies of the FEIS will be provided to your office.

Letter 88 - Bill Wichers, Wyoming Game and Fish Department, Page 2

are added, this would increase the disturbance area loss to 45,000 acres. We believe this level of disturbance has the potential to significantly impact wildlife resources in this area.

Specific comments:

1 Sec 2.2 — We are concerned that the Bureau did not include sage grouse leks and associated nesting habitats in definitions of "sensitive resources" that would receive additional protection and mitigation in both Alternative A and Alternative B. Including raptor nesting concentration areas and big game crucial winter ranges in the Sensitive Resource Areas are certainly appropriate, but we fail to see how sage grouse leks and nesting complexes could be perceived to be less sensitive to gas exploration and development activities than these other wildlife resources. Observations in and near the project area have demonstrated that sage grouse leks are sensitive to development. Results of the first year of the Wyoming Cooperative Fish and Wildlife Research Unit study on effects of gas development on sage grouse (Lyon and Anderson, 1999) document that even minor gas development has a significant effect on nest site selection by sage grouse hens, with 14 of 19 hens from leks disturbed by gas development activities nesting outside the normal 2-mile buffer around their lek of capture, compared to 1 of 9 hens from undisturbed leks that nested outside the 2-mile buffer. We recommend that either sage grouse leks and the appropriate nesting buffer be included in the Sensitive Resource Areas for these two alternatives, or that additional alternatives be developed and analyzed that would afford the same mitigation and reclamation protections to these sensitive wildlife habitats.

2 Sec 2.2 — This Draft goes to great lengths to explain the problems posed by the checkerboard land ownership on development and drainage of federal gas reserves, indicating that the potential of drainage in wells on private and State lands and the subsequent losses of revenue would eventually force development on the federal lands. In the final sentence of this paragraph, the Bureau notes that all of the reclamation requirements that make up the core of Alternative A would be disregarded if necessary to protect federal gas reserves from drainage. Since the problem of drainage to private and State lease wells is expected to occur throughout nearly all of the project area, and this threat is adequate to disregard the reclamation protections of Alternatives A and B, it is unclear what real alternative is being presented. Additional reclamation protections would exist on paper, but in reality, the Bureau would set these protections aside whenever a well is developed or planned on any adjacent State or private lease. Since development is expected to occur at 2-8 wells per section on the private and State leases within the project area, it is not apparent where the additional protections would occur.

Sec 2.3 — See previous comment for section 2.2.

7.2.88.1 Letter 88 - Bill Wichers, Wyoming Game and Fish Department

WYOMING
GAME AND FISH DEPARTMENT

"Conserving Wildlife —Serving People"

June 11, 1999

WER 7945.01
Bureau of Land Management
Rawlins and Rock Springs Field Offices
Draft Environmental Impact Statement
Continental Divide/Wamsutter II Natural Gas Project
State Identifier Number: 97-105
Sweetwater and Carbon Counties

Wyoming State Clearinghouse
Office of Federal Land Policy
ATTN: Julie Hamilton
Herschler Building, 3SW
Cheyenne, WY 82002

Dear Ms. Hamilton:

The staff of the Wyoming Game and Fish Department has reviewed the Draft Environmental Impact Statement for the Continental Divide/Wamsutter II Natural Gas Project on the Rawlins and Rock Springs Field Offices. We offer the following comments.

Terrestrial Considerations:

We agree with the document's conclusion that significant impacts from indirect disturbance to big game and raptors will occur. As such, of the alternatives provided, we support an alternative which provides for the greatest protection of Sensitive Resource Areas.

Operators propose to drill and develop approximately 3,000 well locations on federal, State and private lands, beginning in 1999 and continuing for 10-20 years. The project life is estimated to be 30-50 years and would result in an additional 1,500 miles of new roads and various related facilities. There are currently about 845 wells producing or permitted in the area, 125 more wells (17% increase) than were documented when we commented on the last scoping document in June 1997. The document estimates a maximum direct surface disturbance of 97 acres per section, assuming 8 wells per section. Using the Bureau estimate for the maximum loss of 97 acres per section, this would mean that an average of 12 acres will be disturbed per location. This alone would result in impacts to 36,000 acres; if the 750 wells already approved

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Letter 88 - Bill Wichers, Wyoming Game and Fish Department, Page 3

3 Sec 2.4 — This section iterates the philosophy that appears to be driving this entire project, that the possibility of drainage of the federal gas reserves "would not be in the public's best interest due to loss of royalties." While the loss of royalties is certainly a negative and undesirable impact, we question whether that resource alone defines the public's "best interests." The American public has sacrificed their mineral royalties to protect other resources in national parks, wilderness areas, recreational areas, wildlife refuges, and even Bureau Wilderness Study Areas. The Bureau's Resource Management Plan for this area directs the Bureau to manage for multiple resources. We recommend the Bureau analyze at least one alternative where other resources within this project area are balanced against the threat of loss of federal royalties. An example would be to re-evaluate Alternative A without the last sentence of paragraph 5 of section 2.2.

4 Sec 2.6.6 — Repeated noises from compressors on production facilities have been implicated in the abandonment of at least two leks within the project area, and this issue was mentioned during the scoping process. We recommend the compressor noise development specifications include criteria for muffling these compressors to prevent similar impacts in the future. To prevent compressor noises from interfering with sage grouse mating calls, mufflers need to be effective enough to eliminate compressor sounds at 1/4 mile, or at a minimum, 40 dBA during conditions with cold, dense, calm air.

5 Sec 2.6.8 — It is unclear why the Bureau chose to minimize acreages expected to be lost to ancillary facilities to just 100 acres for analysis purposes, when the actual acreage expected to be lost is 144 acres. This reduces the apparent impacts of these facilities by 30 percent, which appears to be significant. If it was absolutely necessary to round off the 144 acre figure, an estimate of 150 acres would appear to be more representative of expected development.

6 Sec 2.6.13.7 — Since compressors are not technically "motorized", we recommend this section include the requirement that compressors be muffled.

7 Sec 2.6.13.9 — Mitigation measure 13 appears to state the standard mitigation measure for activities within the two-mile buffer around sage grouse leks during the breeding and nesting season, but has been reworded in a fashion that removes much of the protection of that mitigation. Applying the mitigation only on "suitable sage grouse nesting habitat" is perfectly adequate for protecting nests, but does nothing to protect the strutting activities that allow the nesting to occur. As written in this section, drilling activities could occur immediately adjacent to a lek during the peak of the strutting period if the well pad happened to lie in habitats not suitable for sage grouse nesting. We strongly recommend this mitigation measure be reworded to accurately reflect the intent of the statewide protective stipulation, which bars any development

Letter 88 - Bill Wichers, Wyoming Game and Fish Department, Page 4

Ms. Julie Hamilton
June 11, 1999
Page 4 - WER 7945.01

7 activity from occurring within two miles of a lek during the strutting period (1 March - 20 May in the Red Desert). Development could occur in habitats unsuitable for nesting during the nesting period (21 May - 30 June).

See 2.6.13.9 The mitigation measures identified in this section appear to address most of the wildlife concerns associated with this project, with a few exceptions:

8 Mitigation measure 15 does not address a potential hazard to mountain plovers that is posed by a common gas field development action. The timing of plowing and seeding of agricultural fields has been identified as a major hazard to mountain plover populations, since the plowed field serves as a sink to attract nesting plovers who then subsequently lose their nest and any offspring to nesting activities after nesting has occurred. A similar process occurs on these gas fields, although on a smaller scale. It is common for operators to prepare a well pad during the fall or winter, in preparation of drilling the site after big game, raptor, or sage grouse seasonal restrictions have passed. This provides an open, bare 2.6-acre field during the prime breeding season that could attract plovers to nest on it, if drilling activities are initiated prior to hatching, the nest and offspring could be lost. We recommend that mitigation treat these proposed well pads as suitable nesting habitat and require a quick survey of the pad area prior to development if drilling is to occur during the plover nesting and incubation period.

9 There is no action identified to mitigate for the habitat losses that are expected to occur during the life of this project. While the total proportion of the project area is not great, loss of crucial habitats could still have proportionately great impacts on wildlife populations. We recommend some means of mitigating the actual acres of lost habitat be included in this large, long-term project.

10 Table 2.6 NOISE: As mentioned earlier, the breeding activities of sage grouse are probably equally sensitive, if not more sensitive, to noises than those for raptors or the stress levels of wintering big game. We reiterate our concern that sage grouse leks and their associated buffers should be included in the Sensitive Resource Areas. We know of no research indicating that reducing noises to 60 dBA will prevent the negative impacts on breeding sage grouse, and again recommend that equipment be muffled to reduce noises so that they are unnoticeable at 1/4-mile, or at a minimum, 40 dBA.

11 Table 2.6 WILDLIFE: We do not regard the loss of 1,066 acres of crucial antelope winter range, 378 acres of crucial mule deer winter range, nor 585 acres of elk crucial range as insignificant. By definition, "crucial" habitats are those that are necessary to maintain the associated big game population. If these habitats were "insignificant", they would not be identified as "crucial." We again recommend that an adequate means of

Letter 88 - Bill Wichers, Wyoming Game and Fish Department, Page 5

Ms. Julie Hamilton
June 11, 1999
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11 mitigating these significant impacts be included in the proposed action and all alternatives.

We disagree with the conclusion that the expected loss of sage grouse nesting habitat will not be significant. Based upon the research presented in Lyon and Anderson (1999), the expected loss of nesting habitat will be extensive and significant. If more than 70 percent of the sage grouse hens abandon their traditional nesting habitats within two miles of leks disturbed by gas activities, then most of the nesting production within this project area will be lost. This is certainly a significant impact, and needs to be mitigated. Reducing the significant impact would require, at a minimum, that sage grouse leks and associated nesting habitat be included in the Sensitive Resource Areas, noise abatement mitigations be effective, and seasonal restrictions be applied throughout the project.

12 We do not concur that implementation of the small Sensitive Resource Areas identified for Alternatives A and B would be adequate to reduce displacement and stress impacts from "significant" in the proposed action to "insignificant" for the two alternatives. While somewhat beneficial, the identified Sensitive Resource Areas are inadequate to address all important wildlife species in the project area, especially sage grouse. In addition, the caveat that all protections would be disregarded if there is a threat of drainage of fracture gas reserves would effectively remove all mitigative value of the Sensitive Resource Area, even for the species whose habitats are being protected. This is clearly inappropriate.

13 See 3.2.2.1, Pronghorn: While the Bureau and the Department have not identified any specific problem fences within the Red Desert antelope herd unit, researchers from Colorado State University identified the fences of the Tipton allotment at the western edge of the project area as barriers to antelope movements and sources of mortality.

14 See 3.2.2.1, Mule Deer: While the I-80 fences may be the only fences within the project area that impede movements of *adult* mule deer, woven wire fences, which are common in the project area, can and do impede movements of fawns. This can be life-threatening in pastures without reliable water sources in the summer, or during early fall storms when fawns are not yet grown enough to jump clear of the wires.

15 See 3.2.2.1 Elk: It is not accurate to state that most of the habitat in the project area is "not suitable elk habitat." It is only accurate to state that it is "unoccupied habitat."

16 The document states the Bureau anticipates elk would be displaced approximately 1 mile from traffic on roads. Under this assumption, if the habitats occupied by elk are developed as proposed under any of the alternatives, elk will be eliminated from the entire project area. No habitat would be more than 1 mile from a developed road.

17

Letter 88 - Bill Wichers, Wyoming Game and Fish Department, Page 6

Ms. Julie Hamilton
June 11, 1999
Page 6 - WER 7945.01

17 This fact should be acknowledged by the document and appropriate mitigation developed.

18 The Petition elk herd is stated to have a population objective of 200 (page 3-42). This objective is incorrect since the Petition Herd is currently going through its initial population objective setting this year. If approved by the Commission, the objective will be 250-350 animals.

19 Impact to crucial winter range is listed as the only important factor for big game. Although big game populations are limited by winter range, other minimum limiting factors could influence population growth rates, especially when combined with an over-objective feral horse population. Again, without adequate baseline data and continued monitoring of big game, it will be impossible to detect changes that might result from field development.

20 Sec 3.2.2.4 Sage Grouse: We disagree that only 18 of the leks within the project area were active in 1995 or 1996. We have documented at least 20 active leks in that portion of the project area north of I-80 alone. This would not include any of the new leks discovered in the southwestern portion of the project area. We can provide a more complete summary of lek activity in the project area.

21 Sec 3.2.2.4 Sage Grouse: The draft vastly underestimates the amount of optimal sage grouse nesting habitat within the project area. The document states that a 0.25-mile buffer around each lek identifies the optimal nesting habitat, but published research has instead identified a two-mile buffer around each lek as containing the optimal nesting habitat. Recent research with telemetered hens has shown that, in many cases, the two-mile buffer does not adequately delineate optimal nesting habitats, and that it should be larger than two miles. In either case, the 0.25-mile buffer employed in this document, for whatever reason, underestimates true optimal nesting habitat by at least a factor of 64. A quick look at the two-mile buffers shown in Map 3.13 shows that at least 40 percent of the project area is optimal sage grouse nesting habitat, not the 0.7 percent claimed in the Draft.

22 Map 3.13 This map of sage grouse leks is missing the Corral lek, discovered in 1998 at NESE 22 T23N R94W and used again by grouse in 1999. We have no records of any sage grouse leks in the NE quarter of T22N R94W, and suspect this may be a typographic error.

23 Sec 3.2.2.5 White-faced ibis have been observed and recorded near Wamsutter and Battle Springs Flat within the project area, and should be included here, as well as in Table D-2.6.

Letter 88 - Bill Wichers, Wyoming Game and Fish Department, Page 7

Ms. Julie Hamilton
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24 Sec 4.1.1.5 We support Bureau efforts to reduce the need for compressors within the gas field by installing larger pipelines. While these efforts are directed at minimizing nitrous oxide emissions, this mitigation would have the added benefit of reducing noise impacts on strutting sage grouse.

25 Sec 4.1.8.1 While seasonal restrictions on construction and drilling activities will partially mitigate noise impacts on strutting sage grouse, there are concerns whether two miles are adequate for drilling noises during periods of calm with cold air, which is common during the strutting periods. The issue of noises from production activities remains, and is not restricted to the two-mile buffer. The specific concern is steady, repeated loud noises from compressors. We recommend requiring effective mufflers, or installation of pipes large enough that compressors are no longer necessary. Without these mitigations, the cumulative impacts to sage grouse populations across the project area could be significant.

26 Sec 4.1.8.2. While net effects of noise would be less under this alternative, cumulative negative effects on sage grouse would be similar to those under the proposed action, since sage grouse leks and buffers are not included at Sensitive Resource Areas.

27 Sec 4.1.8.3. While net effects of noise would be less under this alternative, cumulative negative effects on sage grouse would be similar to those under the proposed action, since sage grouse leks and buffers are not included at Sensitive Resource Areas.

28 Sec 4.2.3 This section concludes that the impacts of this project on big game would be insignificant, yet Table 4.10 shows that just over 5 percent of the crucial winter range for the Red Desert antelope herd would be disturbed. Since crucial winter ranges are the most limiting habitats for herds in this area, this could represent a five percent loss in the number of antelope that can be supported in the herd unit. With an objective of 15,000 antelope, this habitat disturbance could represent 750 antelope, which exceeds the entire annual harvest from this herd for some years. These losses would be long term, and would result in loss of the annual, harvestable recruitment from those 750 antelope as well. Given the high demand for hunting licenses in these antelope areas, that loss of resource and recreational use can hardly be called insignificant, and the Bureau should evaluate means of mitigating these losses of crucial habitats.

29 The estimation of the direct loss of 11,000 acres of sagebrush drops to 3,700 acres for Life Of Project. However, it may take 25-30 years for the sagebrush to return to its original condition, so essentially all of the area should be considered lost during that time. In addition, the management objectives for vegetation listed on page 4-40 are general goals, not quantifiable objectives. Without quantifiable objectives, the

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29 attainment of the goals listed in this document are determined by opinion and judgment, not empirical data.

30 We largely agree with the assessment of Indirect Impacts to Big Game on pages 4-53 to 4-55 of the document. The fact that few studies have been made of effects of roads on elk in open habitats is acknowledged; however, we request that the references to studies made relative to oil and gas development impacts also identify the habitat type within which the research was conducted.

31 Impacts to sagegrouse and small mammals are predicted to be insignificant. Again, we found no data to support this claim, or listed methodology on how small mammal impact determinations would be made. For some small mammal populations, the document's conclusions may be incorrect. The edge effect created by disturbance throughout the project area may favor some ground squirrel populations, as an example. It would seem that without any data, the best the Bureau could do is state that the impacts to small mammal and sagegrouse populations are unknown.

32 The list of indicator species is primarily potential threatened and endangered species (listed or potential), which include only a small portion of wildlife found in the project area. Swift fox may occur in the project area since this is thought to be historic range. Swift fox sign was found near Chain of Lakes, and there was a probable sighting near the northern portion of the project area in 1995. We did not find any monitoring criteria for swift fox listed.

33 Sec 4.2.3.1 As noted above, the loss of more than five percent of the crucial winter range for the Red Desert antelope herd would be a significant effect, and could easily prevent this herd from attaining population objectives.

34 Sec 4.2.3.1 Additional Potential Bureau-Required Mitigation: This section contains a long list of mitigation efforts directed towards minimizing impacts on wildlife resources. We support the use of mitigation, but also recognize that most mitigation is not required in all circumstances. We are concerned about the lack of commitment to these mitigations by both the Bureau and the operators, the lack of any guidance as to when these mitigations might be applied, and the possibility of them being totally omitted. Nearly all employ the terms "the Bureau *may* [emphasis added] require" a given mitigation. The analysis appears to assume that these mitigations will be employed liberally, resulting in the conclusion that impacts will not be significant. It is unstated what criteria will be used to determine when a mitigation measure will be employed. For the assurance of minimizing impacts to wildlife, we would prefer that these mitigation measures be employed uniformly across the project area and duration, with provisions and criteria for excepting these measures when they are no longer warranted, or the resource benefit ceases to occur.

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35 Sec 4.2.3.1 Cumulative Impacts: We concur with the conclusion here that impacts to the Red Desert antelope herd are "anticipated to be significant." This statement disagrees with statements made earlier in the document that impacts to big game would not be significant.

36 Sec 4.2.3.2 None of the mitigation measures in this project have addressed impacts of powerlines on sage grouse, both on lek attendance and on fragmentation of nesting/brood-rearing habitats. Placement of powerpoles has been documented as displacing leks by 1 kilometer, or causing lek sites to be abandoned. Sage grouse apparently perceive the poles as predator perches, whether raptor-inhibitor devices are in place or not. We recommend any powerline associated with this project should avoid leks by at least 1 kilometer. To minimize habitat loss due to avoidance of the poles, we recommend that powerlines follow existing corridors as much as possible.

37 Sec 4.2.3.2 The displacement of nesting sage grouse hens away from leks disturbed by gas development activities where existing oil and gas stipulations were employed was documented near Pinedale by Lyon and Anderson (1999) and indicates that these stipulations are probably *not* always adequate.

38 Sec 4.2.3.2 Applicant Committed Measures: As mentioned earlier, the mitigation of not permitting construction activities within two miles of a lek during the breeding season needs to be applied to all lands within that two-mile radius, not just on available sage grouse nesting habitat. Only after breeding activities have ceased, and just the nests themselves are of concern, does it matter what habitat type the disturbance will occur in.

Sec 4.2.3.2 Additional Potential Bureau-Required Mitigation: See comment for Additional Potential BLM-Required Mitigation for Section 4.2.3.1.

39 Sec 4.2.3.2 Cumulative impacts. This paragraph states that "No new surface disturbance would occur within potential sage grouse breeding habitat," but roughly half of this habitat would be expected to be on private or state lands, which receive no protection from the Bureau stipulations. Bureau authorization of this project will accelerate and facilitate development of leases on those private and State lands. Impacts to sage grouse breeding areas on private and State lands will largely be a result of this federal action, since the economic viability of developing wells on those lands will depend on the proximity to pipelines, roads, and ancillary facilities that are approved via this Environmental Impact Statement. With no protection afforded to those breeding areas on private and State lands, impacts from field development would be expected to be quite severe, approaching half of the resident sage grouse population.

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40 Map 4.7. This map of sage grouse leks is missing the Corral lek, discovered in 1998 at NESE 22 T21N R94W and used again by grouse in 1999. We have no records of any sage grouse leks in the NE quarter of T22N R98W, and suspect this may be a typographic error.

41 Sec 4.2.5.5 We recommend the mitigation measures proposed for mountain plover include the mitigation of checking any well pad that has been idled during the plover breeding and nesting period for presence of plover nests prior to initiating construction or drilling activities.

42 See D-1.0 The prediction that the wildlife mitigation plan would continue for a "maximum of 21 years" is based upon the expected rate of development of this field. If development is slowed or delayed, which could easily occur based upon economics, we recommend that this mitigation plan continue throughout the exploration and development phases of this project, without an artificial termination date. We also recommend that the process continue throughout the life of the project, to both guide reclamation and to evaluate effectiveness or impacts of any new techniques or technologies that may arise to boost or disrupt field production.

43 Map D-1.1. Based upon recent telemetry work with sage grouse hens, particularly associated with gas development in the Pinedale area (Lyon and Anderson 1999), the two-mile buffer around the project area is probably not adequate.

44 Table D-2.1. Based upon recent telemetry work with sage grouse hens, particularly associated with gas development in the Pinedale area (Lyon and Anderson 1999), the two-mile buffer around the project area is probably not adequate. We recommend lek surveys be conducted following standardized guidelines for procedures and conditions.

45 Table D-2.2. It states in this table that operator assistance for other studies would not exceed $5,000 for any one year. This appears to be an inappropriate item for a National Environmental Policy Act document. From an implementation standpoint, it also appears inappropriate. Just as it is not in the Bureau's sphere of influence to require companies to spend a certain amount a year, it would seem equally inappropriate to limit the amount a company could spend. We are concerned that this limit may encourage extensive impacts with only a limited responsibility for dealing with those impacts.

46 Table D-2.3. We recommend the Protection Measure for mountain plover nest/brood avoidance be expanded to include well pads that have been idle during the breeding and nesting period.

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47 Table D-2.5. White-faze ibis have been observed and documented in the project area near Wamsutter and also near Battle Springs Flat.

48 Sec D-2.2.2.3. Well pads that have been idle during the breeding and nesting period should be treated as suitable nesting habitat for mountain plovers and should undergo clearance surveys prior to construction activities.

49 Sec D-2.2.3 We recommend aerial sage grouse lek surveys be conducted with fixed wing aircraft, rather than rotary, and at sloww ground heights of 150-300 feet.

50 Map D-2.3. This map of sage grouse leks is missing the Corral lek, discovered in 1998 at NESE 22 T21N R94W and again by grouse in 1999. We have no records of any sage grouse leks in the NE quarter of T22N R98W.

Sec D-2.2.5. See comments for Table D-2.2 above.

51 Sec D-2.3.3 As mentioned earlier, the mitigation measure for sage grouse leks appears to state the standard mitigation measure for activities within the two-mile buffer around sage grouse leks during the breeding and nesting season, but has been reworded in a fashion that removes half the protection of that mitigation. Applying the mitigation only on "suitable sage grouse nesting habitat" is perfectly adequate for protecting nests, but does nothing to protect the strutting activities that allow the nesting to occur. We strongly recommend this mitigation measure be reworded to accurately reflect the intent of the statewide protective stipulation, which bars any development activity from occurring within two miles of a lek during the strutting period (1 March - 20 May in the Red Desert). Allowing development to occur in habitats unsuitable for nesting during the nesting-only period (21 May - 30 June) would still be a reasonable mitigation.

52 Sec 5-2.5.2 Observations of loggerhead shrikes during the nesting season suggest this species is able to use tall stands of Basin sagebrush for nesting habitat. This increases the expected impact of this project on nesting habitat for this species.

53 Sec 5-2.5.3. Stands of tall Basin sagebrush should be included in surveys for loggerhead shrike nests prior to disturbance.

54 Sec 5-2.6.3 As noted earlier, we recommend that undrilled well pads that have been idle during the breeding and nesting period be treated as potential nesting habitat to be surveyed for mountain plover nests or broods.

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Monitoring Plan comments

In Appendix D, the Wildlife Monitoring Plan does not have statistically valid sampling criteria, especially since some populations are measured only in 5-year intervals. The fewer the sampling units, or occasions, the lesser the chance a difference can be detected statistically (Peterman 1990, Gerrodette 1987). This plan probably will not detect a change to any wildlife population until the project is complete. We should be attempting to statistically detect with "high power" (Peterman 1990) that gas field development does not have a detrimental effect on wildlife populations. In addition, there is no mention of data analysis or statistical tests that will be used to determine if a specific wildlife population is affected. The monitoring plan has been, and continues to be, a large point of contention.

55 We are deeply concerned that the proposed monitoring has not been designed in a way to scientifically detect changes in wildlife populations. We are also concerned the Bureau will not, under current manpower restraints, be able to fulfill their commitment to this monitoring plan. The Department was asked to be a larger participant in this monitoring plan, but we do not believe we can accomplish the additional tasks without compromising our existing workload.

We want to be clear that we believe the monitoring plan is a very important aspect of the Draft Environmental Impact Statement and this project. We realize many of the issues raised in regards to wildlife impacts are not backed by definitive studies. For this reason, the monitoring programs will provide the majority of data to measure impacts to wildlife. Monitoring must be adequate to determine the cause and effect relationships between gas field development and wildlife. If field development does cause significant impacts to some species of wildlife, we need to be able to react to those impacts in a timely manner.

In particular, we request that the sage grouse lek monitoring discussed in section D-2.2.3 paragraph 2 of the Wildlife Protection Plan be designed according to the standardized
56 methodology adopted by the Western States Sage Grouse Technical Committee. These data would serve to monitor population levels and trends on impacted areas versus undeveloped control areas. The methodology is available from the Department.

We believe the Bureau should require scientifically backed monitoring for those species of wildlife of greatest concern. There also needs to be a commitment of additional resources to
57 ensure the monitoring is done in a timely and meaningful manner. Lastly, the Bureau should be willing to modify operations and even future lease stipulations based on the results of monitoring. The Department is very interested in developing impact levels at which adequate modifications in operations should occur.

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LITERATURE CITED

Gerrodette, T. 1987. A power analysis for detecting trends. Ecology 68:1364-1372.

Lyon, A. G. and S. H. Anderson. 1999. Effect of Gas Development on Sage Grouse Populations - 1998 Field Season Findings. Univ. Wyoming Coop. Fish and Wildl. Research Unit. 40pp.

Peterman, R. M. 1990. Statistical power analysis can improve fisheries research and management. Canadian Journal of Aquatic Science 47:2-15.

Aquatic Considerations:

58 It should be noted in the Environmental Impact Statement that the Department of Environmental Quality has proposed to change the classification of Bitter Creek from a Class 4 water to a Class 2C water.

Thank you for the opportunity to comment.

Sincerely,

Bill Wichers

BILL WICHERS
DEPUTY DIRECTOR

BW:TC:as
cc: USFWS

7.2.88.2 Letter 88 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS. Your comments emphasize the need for better cooperation between BLM and WGFD during preparation of future NEPA documents so as to resolve questions such as you have brought up prior to issuance of a draft document. Please be assured that the BLM will continue to work with the WGFD during the development of this and other NEPA analyses.

Comment Response 1 - During preparation of the DEIS, BLM did not believe that sage grouse leks required inclusion as SRAs because of the standard protection already afforded the species under existing stipulations. However, due to the level of comment on this subject during DEIS reviews, we have now included leks and their 2-mi probable nesting buffers as SRAs. Text, tables, maps, and figures have been modified accordingly in this FEIS. The BLM does not believe that additional alternatives analysis is necessary.

Comment Response 2 - The only thing that would be temporarily suspended under Alternatives A and B to protect federal gas reserves from drainage would be the requirement for specified limits on disturbed lands. All other mitigation requirements would remain in place. While surface disturbance limitations may be temporarily exceeded due to drainage drilling, in the event this does occur, the BLM would require Operators to rectify this situation as soon as possible.

Comment Response 3 - The BLM manages lands under its jurisdiction for multiple use; however, this does not mean that all uses receive equal consideration on all lands. Obviously, we have given special consideration to certain lands--primarily those that have special environmental values such as wilderness study areas, crucial winter big game range, sage grouse leks and nesting areas, raptor nests, etc. Recovering oil and gas resources is a legitimate, and in fact congressionally mandated, use of federal lands and contributes to environmental quality by providing, especially in the case of natural gas, a clean energy source. The BLM must constantly balance the various uses of lands under its management, and we believe that the development plans for the CD/WIIPA provide for oil and gas recovery as well as for protection of environmental values. The Proposed Action and Alternatives A and B all provide for environmental protection as well as oil and gas resource recovery, but to various degrees. We see no reason to provide an alternative that further increases the possibility of loss of federal royalties (half of which go to the State of Wyoming).

Comment Response 4 - Compressor stations currently operating within the CD/WIIPA generate an average noise level of 39.5 dBA at 0.25 mi (see DEIS Figure 3.3).

Comment Response 5 - The figure was rounded to the nearest 100 acres, not in an attempt to minimize surface disturbance acreage estimates. Please note that in Table 2.1 of the DEIS we have rounded all of the disturbance acreage to the nearest 100 acres. Forty-four acres represents approximately 0.2% of the

projected new disturbance under the Proposed Action, and its inclusion would not notably change impact analyses.

Comment Response 6 - Compressors are considered motorized and would be muffled and maintained to reduce noise levels.

Comment Response 7 - DEIS Section 2.6.13.9, item 13, is designed to protect probable sage grouse nesting areas. Leks are protected under item 12 in the same section, which states, "Operators would not conduct surface-disturbing activities within 0.25 mi of active sage grouse leks." This is essentially a "no surface occupancy" within 0.25 mi of an active lek at all times, unless a suitable plan is agreed to by the BLM. No construction or drilling would be authorized by the BLM within 0.25 mi of lek centers at any time, regardless of habitat. In addition, leks would be monitored to determine whether project activities and associated noise may be affecting lek attendance.

Comment Response 8 - Thank you for pointing out the possibility of mountain plover nesting on well pads constructed prior to the plover nesting season, but not being utilized for project activities until after plover nesting is underway. To prevent damage to nests that may be built on such locations, additional mitigations for mountain plover have been included in this FEIS (see Sections 2.6.13.9, 4.2.5.5, D-2.2.2.3, D-2.3.2.3, E-4.1, and E-5.2.6.3).

Comment Response 9 - Some wildlife habitat will be lost both in the short-term and for the LOP as a result of oil and gas development, and some of this habitat is crucial habitat. There is no attempt to hide this fact in the DEIS. Such losses are not permanent--the proposed project has a definite life, after which reclamation and natural processes are likely to return habitats to their previous status. Multiple use means that all resource users must make some sacrifices so that other users are accommodated. Operators would be required to accommodate wildlife needs, and in return some impacts to wildlife would occur, most of which we believe would be insignificant. Timely reclamation would result in habitat replacement within a few years (grasses and forbs) or, with shrubs, over a more extended period of time (up to 30 years). In addition, under Alternatives A and B some existing disturbance would likely be reclaimed.

Comment Response 10 - BLM anticipates noise levels to be less than 60 dBA at 0.25 mi and will require muffling to reduce noise levels. DEIS Section 4.1.8.5 gives the BLM the option to require further mitigation for noise on a case-by-case basis. See also Comment Responses 1 and 4, above.

Comment Response 11 - The BLM does not agree that the anticipated project-specific loss of big game crucial range would be significant. We do not agree that the project would negate WGFD's ability to achieve population objectives for the respective antelope, mule deer, or elk herds. See also Comment Response 9, above.

Comment Response 12 - As mentioned in Comment Response 1 above, sage grouse leks and nesting areas are now included in SRAs. Also, additional measures may be applied during wildlife monitoring if survey results indicate that they are necessary to provide further protection of sage grouse nesting areas. While we were unable to locate the reference Lyon and Anderson (1999) (discussions with the author, Dr. Stan Anderson, indicated no such report existed), we have reviewed the report by Lyon and Anderson (1998) and do not find evidence indicating "extensive" or "significant" impacts to sage grouse nesting habitat, although we do not rule out the possibility that additional years of study may reach that conclusion. However, based on your comments and those of others, the BLM has modified the impact assessment conclusions in this FEIS to indicate that significant impacts to sage grouse could occur.

Comment Response 13 - As previously mentioned, sage grouse leks and probable nesting areas are now included as SRAs. Also, all mitigation pertaining to sage grouse would not be disregarded if there is a threat of drainage of federal gas reserves--only the unreclaimed disturbance limits would be temporarily suspended. The text has been modified in this FEIS to better explain this exception. See also Comment Response 2, above

Comment Response 14 - Comment noted; however, the fence in question is privately owned and not under the jurisdiction of the BLM.

Comment Response 15 - Comment noted, and the text in Section 3.2.2.1 has been modified in this FEIS to reflect the impacts of fences to mule deer, especially fawns.

Comment Response 16 - We have changed "not suitable elk habitat" to "unoccupied" in the text of this FEIS.

Comment Response 17 - The displacement of elk from roads depends upon a number of factors, including the timing, amount, and type of traffic and surrounding topography (which may mitigate traffic impacts by limiting the field of vision). In addition, development may not occur in elk habitat to the same degree that it occurs elsewhere. Additional mitigation has been mentioned in DEIS Section 4.2.3.1.

Comment Response 18 - Comment noted, and changes have been made to Section 3.2.2.1 in this FEIS.

Comment Response 19 - The BLM does not believe that crucial habitat is the only important factor affecting big game populations. We realize that two very important factors regulating big game herds are weather and hunting regulations. Not only can severe cold and snow affect populations, but so can periods of drought and other extreme or unusual climatic conditions. Hunting may also affect populations, especially if a liberal harvest is followed by a severe winter, which is of course impossible to predict.

The BLM assumes that the WGFD will continue its monitoring program of big game herds. Monitoring big game herds is difficult enough, but assessing the reason for year-to-year population changes is virtually impossible in the short-term. However, if there is reasonable evidence from monitoring that oil and gas development may be having a serious impact on big game populations, the BLM would consider additional mitigations to remedy the situation.

Comment Response 20 - We have updated the sage grouse lek information in this FEIS based on information supplied by WGFD.

Comment Response 21 - The BLM agrees and the DEIS indicates that a 2-mi buffer around each lek be considered sage grouse nesting habitat, and as stated previously, we have included these areas as SRAs (see Comment Response 1, above). The 0.25-mi buffer around leks is considered optimal breeding (not nesting) habitat. We also concur that some nesting occurs outside of the 2-mi radius; however, the 2-mi radius is generally accepted to represent the area that contains "most" nesting and that is why we have used it in this document. The text has been modified to reflect this change.

Comment Response 22 - We have added the Corral lek to Map 3.13 in this FEIS. The BLM does have a record of the lek in the NE quarter of T22N, R98W.

Comment Response 23 - White-faced ibis have been added to the text and to Table D-2.4 and deleted from Table D-2.5 in this FEIS.

Comment Response 24 - Comment noted.

Comment Response 25 - It is anticipated that some compression will always be necessary. Compressor stations would be equipped with appropriate equipment to muffle noise (see Comment Response 6, above). If monitoring indicates that significant impacts to sage grouse are occurring during strutting additional mitigations may be required.

Comment Response 26 - Sage grouse leks and a 2-mi buffer have been added to SRAs.

Comment Response 27 - Please refer to Comment Response 26, above.

Comment Response 28 - DEIS Table 4.10 discloses an estimated project-specific 534-acre (0.2%) LOP reduction in crucial winter/yearlong range in the Red Desert antelope herd and an initial disturbance of 1,032 acres (0.4%) of such range. The BLM does not consider such a change a significant impact. The 5.2% reduction in such habitat includes existing disturbance and potential future disturbance within the GCIAA, which is not project-related. In the cumulative impacts section for big game, this 5.2% reduction in crucial winter/yearlong antelope habitat for the Red Desert herd is considered significant. The 5% drop in the Red Desert antelope herd, if it did occur, would mean a reduction in the population objective from 15,000 to 14,250, which may not even be a measurable change given the precision of current population estimation techniques. A 5% reduction in a harvest of 750 animals would result in a harvest of 712 animals. The BLM did consider the 5% reduction in crucial winter range a potentially significant cumulative impact.

Comment Response 29 - The BLM concurs that the loss of sagebrush vegetation could continue for 25-30 years until sagebrush returns to its original condition. While sagebrush habitat would be lost to varying degrees during this time, other vegetation--grasses and forbs--would be more abundant. Although grasses and forbs are not a substitute for sagebrush, they would provide additional forage for some wildlife species. Finally, please refer to the Reclamation Plan (see DEIS Appendix A) which does provide for quantifiable revegetation objectives.

Comment Response 30 - Because the DEIS presents only the estimated potential displacement distances from all potentially affected habitats, the BLM believes that habitat type descriptions for each referenced study are unnecessary. All references are fully cited in DEIS Chapter 6.0.

Comment Response 31 - Absolute numerical changes in populations of nongame and small mammals are obviously impractical to make; however, since no more than 3.2% of any habitat type would be disturbed by the proposed project, the BLM believes it is logical to reach the conclusion that impacts to these species would not be significant.

Comment Response 32 - Swift fox have been identified as potentially occurring in the CD/WIIPA (see DEIS Section 3.2.4.1), and protection measures are identified in DEIS Sections 4.2.5.5, D-2.3.2.5, and E-5.1.7.2.

Comment Response 33 - Please refer to Comment Response 28, above.

Comment Response 34 - The ROD for the CD/WIIPA will include those mitigation measures that the BLM deems appropriate, taking into consideration comments from the WGFD and others. Only the Operator-committed mitigation measures mentioned in the DEIS were considered to be applied when making impact determinations. Only the applicant-committed practices were assumed to be in place. Additional mitigation measures will be applied only if the BLM determines them to be necessary and justifiable to prevent unnecessary and undue degradation.

Comment Response 35 - The determination of significance due to cumulative impacts does not disagree with the determination of no significance for project-related activities. Please refer to Comment Response 28, above.

Comment Response 36 - While no power lines are proposed for the project, appropriate mitigation for sage grouse is provided in DEIS Section D-2.3.3 (0.6-mi avoidance area).

Comment Response 37 - The BLM agrees that existing stipulations are probably not always adequate to protect all nesting sage grouse; however, we believe that at present they represent reasonable sage grouse nest protection. We do not agree that the recent study (Lyon and Anderson 1998) proves anything conclusively, since there is relatively little data on which to base sweeping conclusions. Please also refer to Comment Response 7, above.

Comment Response 38 - Please refer to Comment Response 7, above. At this time, the BLM does not believe it is necessary to exclude all construction and drilling activities within 2.0 mi of leks; however, these areas are off limits to development during the breeding and nesting periods.

Comment Response 39 - It is assumed that development on private lands would occur regardless of the BLM's decision on the proposed project (see DEIS Section 2.4). The BLM concurs and the DEIS indicates that where applicant-committed measures are not applied on non-federal lands, impacts could be significant (see DEIS Chapter 4.0, page 4-1, paragraph 1).

Comment Response 40 - Please refer to Comment Response 22, above.

Comment Response 41 - Please refer to Comment Response 8, above.

Comment Response 42 - Comment noted. The BLM may require the wildlife plan to continue beyond the 21-year period depending upon plan effectiveness as determined during annual reviews.

Comment Response 43 - Please refer to Comment Response 37, above.

Comment Response 44 - Please refer to Comment Response 37, above. Sage grouse lek surveys would be conducted as specified in DEIS Section D-2.2.3.

Comment Response 45 - The Operator obligation of no more than $5,000 per year is an applicant-committed practice, not a decision made by the BLM. Additional Operator-provided monies would be provided for aircraft costs, and further monies may be required in the future based on impacts observed during monitoring and associated mitigation responses. Prior to the receipt of Operator financial commitments, the Cooperative Agreement for Wildlife Protection Plan implementation would be finalized by participants.

Comment Response 46 - Please refer to Comment Response 8, above.

Comment Response 47 - Please refer to Comment Response 23, above.

Comment Response 48 - Please refer to Comment Response 8, above.

Comment Response 49 - BLM personnel are prohibited from flying in fixed-wing aircraft below 500 ft. Furthermore, BLM personnel are aware of the problems associated with sage grouse flushing distances from helicopters; however, new leks have been successfully located by the BLM using helicopter surveys. No text changes have been made.

Comment Response 50 - Please refer to Comment Response 22, above.

Comment Response 51 - Please refer to Comment Response 7, above.

Comment Response 52 - Your comment regarding the use of tall stands of basin big sagebrush for nesting by loggerhead shrike is noted.

Comment Response 53 - Comment noted. Tall stands of basin big sagebrush would be included in surveys for loggerhead shrike.

Comment Response 54 - Please refer to Comment Response 8, above.

Comment Response 55 - The monitoring program is just that--a monitoring program, not a scientific study that proposes to detect annual changes in populations. It can at best determine possible long-term trends in wildlife populations. However, observations made during monitoring may lead to more detailed studies of some populations, but such studies are not identified at this time (see DEIS Tables D-2.2). You are correct in assuming that no rigid statistical methods are being proposed in the current studies. Scientific studies, if deemed appropriate by the BLM, would be developed in cooperation with all participating parties.

The BLM is committed to implementing its responsibilities in this monitoring program. We understand that WGFD may not be able to participate at the level originally contemplated due to prior commitments. The BLM agrees with WGFD as to the importance of this monitoring program and the role it would play in responding to potentially adverse effects to wildlife.

Comment Response 56 - The BLM has obtained a copy of *Sage Grouse Methodology Committee Report on Sage Grouse Management Practices* and will consider their recommendations when finalizing the survey techniques to be used in monitoring studies for the CD/WIIPA. The BLM anticipates that modifications to the wildlife plan would occur over time, and if appropriate, sage grouse monitoring protocol may be modified to more closely match those adopted by the Western States Sage Grouse Technical Committee.

Comment Response 57 - Please refer to Comment Response 55, above. The BLM would like to meet with WGFD to acquire their input on future monitoring/scientific studies in the CD/WIIPA. It is quite possible that additional studies would be required based on monitoring results and that Operators would be required to adhere to additional measures to protect wildlife resources based on such monitoring. While not anticipated, existing operations and leases could be modified with Operator concurrence regarding proposed changes. Furthermore, future leases and operations may include additional mitigation measures, and the results of CD/WIIPA studies may lead to additional restrictions to Operators at other locations, as well as to lease stipulations in other areas.

Comment Response 58 - Comment noted.

7.2.89.1 **Letter 89 - David S. Benner, State Engineer's Office**

State Engineer's Office

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JIM GERINGER
GOVERNOR

GORDON W. FASSETT
STATE ENGINEER

May 12, 1999

Clare Miller
Rawlins Field Office
Bureau of Land Management
P.O. Box 2407
Rawlins, WY 82301-2407

RE: Continental Divide/Wamsutter II Natural Gas Project
(State ID No. 97-105)

Dear Ms. Miller:

The various operators of the proposed project will need permits for the wells that will be drilled. If you or any of the operators should have any questions concerning this matter, please feel free to contact our Ground Water Section at the number listed below.

Sincerely,

David S. Benner

DAVID S. BENNER
Safety of Dams Engineer

DSB/db

Surface Water (307) 777-6476 | Ground Water (307) 777-6163 | Board of Control (307) 777-6178

7.2.90.1 **Letter 90 - Lance Cook, Wyoming State Geological Survey**

WYOMING STATE GEOLOGICAL SURVEY
P.O. BOX 3008 • LARAMIE, WYOMING 82071-3008
307/766-2286 • FAX 307/766-2605
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STATE GEOLOGIST – Lance Cook

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GIS AND DATA MANAGER
Mark Anderson

GIS AND DATA MANAGER
Kenneth D. De Bruin

PUBLICATIONS
Richard W. Jones

June 12, 1999

MEMORANDUM

TO: Julie Hamilton, Wyoming State Clearinghouse

FROM: Lance Cook, P.G., State Geologist

SUBJECT: Continental Divide/Wamsutter II Natural Gas Project Draft EIS (State Identifier # 97-105)

1 Table 4.15 on page 4-78 has several assumptions that should be changed or updated. The first assumption that should be changed is the condensate production. Table 4.15 shows a varying gas to condensate ratio of 2,000 to 8,333 cubic feet of gas per barrel of condensate and an average ratio of 6,300 cubic feet of gas per barrel of condensate. This is much too low. If the cumulative gas production for Stratton Ridge, Echo Springs, and Wild Rose fields is divided by the cumulative condensate production, the average gas to condensate ratio is approximately 50,000 cubic feet of gas per barrel of condensate. Cumulative condensate production should be closer to 51 million barrels. That production would lower gross income for gas and condensate to about $6 billion rather than the $14 billion stated on page 4-79, using the prices on table 4.15.

2 There is no mention of natural gas liquids on Table 4.15. Those liquids have value and should be included. Based on natural gas liquids production at the Williams Plant at Echo Springs, the volume of gas production estimated for the life of this project would yield approximately 60 million barrels of natural gas liquids. Prices for condensate in Table 4.15 are too high and will contribute to overstating gross income, State and local taxes, and Federal royalty. Using an average price for a barrel of condensate of $20.27 in 1999 is probably at least $4.00 too high. The gas price in 1999 is also high ($0.10 or more).

3 Map 2.2 on page 2-3 should be referenced De Bruin and Boyd (1991) and that reference should appear in the list of references.

4 This proposed project has potential impacts to the areas coal mines and currently planed CBM activities. The area is located just east of the Black Butte mine and southeast of the Jim Bridger mine. It is not clear how the proposed oil and gas development would impact the coal mines and the adjacent Jim

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7.2.89.2 Letter 89 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS. The need for Operators to contact the State Engineer's Office regarding ground water utilization (water well drilling) is acknowledged in DEIS Table 1.1 and Section 2.6.13.6 (item 14).

Letter 90 - Lance Cook, Wyoming State Geological Survey, Page 2

4 Bridger coal fired power plant, mainly in respect to air quality permits, and particularly under the new proposed Haze rules. Currently the Black Butte mine has at least 6 pits operating. The standby topping for an improvement in the area's coal markets, and is producing in 3 other pits.

5 Coal bed methane (CBM) received only passing comment in the document (page 3-11). This is understandable in view of the time the EIS was begun (1998). Little CBM activity was expected in the area. However, due to a spillover from CBM activities in the Powder River Basin, several companies are currently beginning to permit CBM exploration holes in or immediately adjacent to the current study area. CBM consultants estimate 4 CBM exploration wells will be completed by the end of 1999 and an additional 50 to 60 wells are on the drawing board for drilling during 2000. The main target of this work is reported to be the Almond and younger coals in the area. Due to the recent activity in CBM interest since the end of 1998, the issues relating to this potential CBM development may need revisiting prior to the release of the final EIS.

6 In table 5-1 [Consultant and Preparer List] Laura Larsen's last name should be changed to Hallberg for current correctness. Gary Glass should be listed as the past State Geologist.

7 On page 3-17, section 3.1.4.2, there are a few updates that are needed. The known active fault system is the South Granite Mountain fault system, not the North Granite Mountain system. The Geological Survey has recently completed a detailed seismological characterization of the area for the Water development Commission. A copy of the report will be supplied upon request. In addition, landslides have been mapped in the area. They are shown on a draft copy of the surficial geology map of the Red Desert Basin 1:100,000-scale quadrangle. A copy of the map will be supplied upon request.

If there are questions on our comments, please direct them to the appropriate geologist on my staff or to me. Rod De Bruin can address specific oil and gas comments, Bob Lyman is our coal expert, and Jim Case handles landslides and worked on the Little Snake project for the Water Development Commission.

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7.2.90.2 Letter 90 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

Comment Response 1 - Table 4.15 and associated text have been revised in this FEIS to reflect the provided gas to condensate ratio.

Comment Response 2 - The gas and condensate price information provided in the DEIS were approximations, and while the prices presented may be high for 1999, no changes have been made since these prices vary widely and the BLM anticipates gas and condensate prices will continue to escalate. The information provided regarding natural gas liquids production is included in this FEIS.

Comment Response 3 - Appropriate changes have been made to Map 2.2 and Chapter 6.0 of this FEIS.

Comment Response 4 - Please refer to Section 7.2.87.2, Comment Response 4, in this FEIS.

Comment Response 5 - Please refer to Section 7.2.87.2, Comment Response 3, in this FEIS.

Comment Response 6 - Your suggested changes have been made to Table 5.1 in this FEIS.

Comment Response 7 - The name of the fault system has been changed in this FEIS. Furthermore, we have reviewed recent seismology and landslide information provided by your office; however, the BLM believes no changes to the DEIS are necessary.

7.2.91.1 Letter 91 - Darla Potter, Wyoming Department of Environmental Quality/Air Quality Division

THE STATE OF WYOMING

JIM GERINGER
GOVERNOR

Department of Environmental Quality

Herschler Building ● 122 West 25th Street ● Cheyenne, Wyoming 82002

ADMINISTRATION (307) 777-7758 FAX 777-7682 | ABANDONED MINES (307) 777-6145 FAX 634-5791 | AIR QUALITY (307) 777-7391 FAX 777-5616 | SOLID/FUEL SYNG (307) 777-7368 FAX 777-5937 | LAND QUALITY (307) 777-7756 FAX 634-5791 | SOLID & HAZARDOUS WASTE (307) 777-7752 FAX 777-5973 | WATER QUALITY (307) 777-7781 FAX 777-5973

July 12, 1999

Through: Julie Hamilton, Wyoming Office of Federal Land Policy

Mr. Clare Miller
USDI-Bureau of Land Management
Rawlins Field Office
P.O. Box 2407
Rawlins, WY 82301-2407

Re: Continental Divide/Wamsutter II Draft Environmental Impact Statement

Dear Mr. Miller:

The Air Quality Division (AQD) of the Wyoming Department of Environmental Quality (WDEQ) has reviewed the Draft Environmental Impact Statement and Air Quality Technical Support Document for the Continental Divide/Wamsutter II Natural Gas Project. Attached you will find the Division's specific comments.

1 In the documents the Savage Run Wilderness Area is referred to as a PSD Class II Area which is incorrect. The Savage Run Wilderness Area is defined by the Wyoming Air Quality Standards and Regulations, Section 29(c), as a Class I area. Although the Savage Run Wilderness Area is not a Federally designated Class I Area, through the State Implementation Plan and Wyoming Prevention of Significant Deterioration regulation, the Savage Run Wilderness Area is legally required to be managed as a PSD Class I Area. The Division believes that it is important to disclose the difference and differentiate between a Federally designated Class I Area and a PSD Class I Area.

- The Division suggests that in these documents the Savage Run Wilderness Area be referred to as a PSD Class I Area.
- The Division also proposes that when discussing Air Quality Related Values (AQRVs), the phrase "PSD Class I Area" be changed to "Federally Designated Class I Area", the Savage Run Wilderness Area be referred to as a "State Defined Class I Area", and the phrase "PSD Class II Area" be changed to "Class II Area".

Letter 91 - Darla Potter, Wyoming Department of Environmental Quality/Air Quality Division, Page 2

Clare Miller, BLM
Continental Divide DEIS
Page 2

2 I would like to bring to your attention that as of 10/15/98 Section 8 of the Wyoming Air Quality Standards and Regulations was revised to be consistent with the Federal ozone standards (EPA promulgated a revised ambient ozone standard on 7/18/97). The revision eliminated the State's 1-hour ozone standard and instituted an 8-hour ozone standard of 160 µg/m3.

3 The documents disclose that the Limits of Acceptable Change (LACs) have been established by a US Forest Service policy for evaluating impacts to Air Quality Related Values in Wilderness Areas but fail to mention that the LACs are not regulatory limits or standards. Failure to disclose that LACs are not regulatory limits or standards may lead the average reader into believing that an air quality standard or limit is being violated based on the results of the visibility impact analysis.

4 The Division finds it troubling to see references to the Air Quality Technical Support Document Volume II to the use of Southwest Wyoming Technical Air Forum (SWWYTAF) information and modeling techniques. If indeed SWWYTAF information has been utilized, it is inappropriate since the information and modeling have not yet been finalized, nor has WDEQ authorized the release of the information to the BLM or Earth Tech Inc. for use in the Continental Divide/Wamsutter II EIS.

5 The Division's comments reflect several items that were not discussed by the Air Quality Stakeholders, at the only two stakeholder meetings held in 1997, nor specified in the Final Air Quality Impact Assessment Protocol dated September 28, 1998. The Division's belief is that additional Air Quality Stakeholder meetings should have been utilized to discuss modeling problems and changes made in the far-field modeling approach prior to the release of the Draft EIS. Additional meetings would have enabled the BLM to answer some questions, that will now have to be answered through the public comment process, and may have alleviated some Stakeholder concerns about the modeling activity that occurred between the last Stakeholder meeting in August 1997 and the Air Quality Impact Assessment Briefing in February 1999.

If you should have questions regarding the comments, please feel free to contact this office.

Sincerely,

Darla Potter
Visibility, Smoke Management, & EIS Coordinator
Air Quality Division

cc: Dan Olson, Administrator
Bernie Dailey, NSR Program Manager
Mary Throne, Senior Assistant Attorney General

Letter 91 - Darla Potter, Wyoming Department of Environmental Quality/Air Quality Division, Page 3

Clare Miller, BLM
Continental Divide Project
Page 3

WDEQ - AQD Comments
June 24, 1999

Comment on Draft Environmental Impact Statement

6 **Page 3-6, Section 3.1.2, 2nd Paragraph**
As of 10/15/98 Section 8 of the Wyoming Air Quality Standards and Regulations was revised to be consistent with the Federal ozone standards (EPA promulgated a revised ambient ozone standard on 7/18/97). Please add an additional sentence to the end of this paragraph to read
"The WDEQ-AQD revised the Wyoming Air Quality Standards and Regulations to be consistent with the revised Federal ozone standard on 10/15/98."

7 **Page 3-6, Section 3.1.2, 3rd Paragraph**
The Savage Run Wilderness Area is defined by the Wyoming Air Quality Standards and Regulations, Section 2A(ii), as a Class I area. Although the Savage Run Wilderness Area is not a Federally designated Class I Area, through the State Implementation Plan and Wyoming Prevention of Significant Deterioration regulation, the Savage Run Wilderness Area is legally required to be managed as a PSD Class I Area. The Division believes that it is important to disclose the difference and differences between being a Federally designated Class I Area and a PSD Class I Area. The Division suggests that in this paragraph the Savage Run Wilderness Area be referred to as a PSD Class I Area and that the following sentence should be inserted after the second sentence.
"Although the Savage Run Wilderness Area is not a federally mandated PSD Class I area, it has the legal requirement to be managed as a PSD Class I area through the Wyoming Air Quality Standards and Regulations."

The Division also suggests that remainder of the document, with the exception of the air quality related value impact sections, be modified to reflect the Savage Run Wilderness Area as a PSD Class I Area instead of a PSD Class II Area.

8 **Page 3-9, Table 3.6**
As of 10/15/98 Section 8 of the Wyoming Air Quality Standards and Regulations was revised to be consistent with the Federal ozone standards (EPA promulgated a revised ambient ozone standard on 7/18/97). The revised Wyoming 1-hour ozone standard and instituted an 8-hour ozone standard of 160 µg/m3.

9 **Page 4-13, 1st Column, 2nd Paragraph, 1st Sentence**
The Air Quality Division does not examine "project-wide" (as in Continental Divide/Wamsutter II Natural Gas Project) air quality impacts on permit applications submitted to the Division. Please reword this sentence to read
"...examine air pollutant emission source air quality impacts."

10 **Page 4-16, 1st Column, Last Paragraph**
The Division would like to point out to the BLM that the majority (Range 91W to 97W) of the proposed Continental Divide/Wamsutter II Natural Gas Project lies outside of the BLM Rock Springs District and that is outside of the existing NO2 modeling area. At present the Air Quality Division's database does not include all of the information necessary to institute an emissions tracking system for the Continental Divide/Wamsutter II Natural Gas Project as was done for the BLM Rock Springs District.

Letter 91 - Darla Potter, Wyoming Department of Environmental Quality/Air Quality Division, Page 4

Clare Miller, BLM
Continental Divide Project
Page 4

WDEQ - AQD Comments
June 24, 1999

11 **Page 4-18, 1st & 2nd Columns**
The Division proposes that a paragraph be inserted between the two paragraphs on this page to differentiate between and disclose the difference between a Federally designated Class I Area and a PSD Class I Area. The suggested language for the paragraph follows.
"Federally designated Class I Areas are different from PSD Class I Areas, in that only Federally designated Class I Areas are afforded special protection with regard to visibility impairment by the recently signed regional haze rule and the existing visibility regulations for reasonably attributable impairment. Therefore, throughout the discussions of air quality related value impacts the sensitive areas are referred to as Federally designated Class I Areas. State defined Class I Areas, and Class II Areas."

The Division then proposes that throughout the rest of the document when discussing Air Quality Related Values (AQRVs) that the phrase "PSD Class I Area" be changed to "Federally Designated Class I Area", the Savage Run Wilderness Area be referred to as a "State Defined Class I Area", and the phrase "PSD Class II Areas" be changed to "Class II Areas".

12 **Page 4-19, 1st Column, Last Paragraph**
The first sentence fails to mention that the USFS Limit of Acceptable Change (LAC) should be compared to impacts to the best visibility (i.e. mean of the cleanest 20%) days. Therefore the comparison of the "method 4" results to the USFS LAC is misleading. The Division would prefer to see the "method 2" results compared to the USFS LAC for appropriate disclosure of the predicted visibility impacts as compared to the LAC.

13 **Page 4-19, 2nd Column, 1st Bullet, Last Sentence**
The Division believes that this statement is incorrect without some basis for the statement being identified. The Division has found that in the Incremental Emissions Tracking Reports for the BLM Rock Springs District in Southwest Wyoming that the emissions of NO2 have been increasing from the 1997 4th quarter report, which reported incremental emissions changes during the 1/1/96 - 12/31/97 time frame, through the 1998 4th quarter report, which reported incremental emissions changes during the 1/1/96 - 12/31/98 time frame and is the last report available at this time.

14 **Page 4-21, 2nd Column, Bullet Paragraph, Last Sentence**
The statement in this sentence is incorrect. The Southwest Wyoming Technical Air Forum (SWWYTAF) has contracted with Earth Tech Inc. for the development of a Secondary Organic Aerosol Module for the CALPUFF model to enable SWWYTAF to model the formation of secondary organic aerosols and predict visibility impairment due to these aerosols. This module has undergone preliminary sensitivity testing and is currently awaiting the initiation of the final model run. The final model run will be initiated once all supporting information is provided by the Earth Tech Inc. and approved by the SWWYTAF Technical Committee.

15 **Page 4-21, 2nd Column, 2nd Paragraph, 1st Sentence**
The Air Quality Division does not examine "project-wide" (as in Continental Divide/Wamsutter II Natural Gas Project) air quality impacts on permit applications submitted to the Division. Please reword this sentence to read
"...examine air pollutant emission source air quality impacts."

Letter 91 - Darla Potter, Wyoming Department of Environmental Quality/Air Quality Division, Page 5

Clare Miller, BLM
Continental Divide Project
Page 5

WDEQ - AQD Comments
June 24, 1999

Comments on Air Quality Technical Support Document -- Volume I

16 **Page 1, 4th Paragraph, 4th Sentence**
The Air Quality Division does not examine "project-wide" (as in Continental Divide/Wamsutter II Natural Gas Project) air quality impacts on permit applications submitted to the Division. Please reword this sentence to read
"...examine air pollutant emission source air quality impacts."

17 **Page II, 6th Paragraph**
Reference comment on DEIS for page 3-6. Section 3.1.2, 3rd paragraph for discussion of the Savage Run Wilderness Area as a Class I Area. The Division suggests that in this paragraph the Savage Run Wilderness Area be referred to as a PSD Class I Area and that the following sentence should be inserted as the last sentence in the paragraph.
"Although the Savage Run Wilderness Area is not a federally mandated PSD Class I area, it has the legal requirement to be managed as a PSD Class I area through the Wyoming Air Quality Standards and Regulations."

The Division also suggests that remainder of the document, with the exception of the air quality related value impact sections, be modified to reflect the Savage Run Wilderness Area as a PSD Class I Area instead of a PSD Class II Area.

18 **Page III, 7th Bullet**
The USFS Limit of Acceptable Change (LAC) should be compared to impacts to the best visibility (i.e. mean of the cleanest 20%) days. Therefore the comparison of the "method 4" results to the USFS LAC is misleading. The Division would prefer to see the "method 2" results compared to the USFS LAC for appropriate disclosure of the predicted visibility impacts as compared to the LAC.

19 As mentioned in the Division's comment on the DEIS for page 4-18, 1st & 2nd Columns, the Division proposed that when discussing Air Quality Related Values (AQRVs) that the phrase "PSD Class I Area" be changed to "Federally Designated Class I Area", the Savage Run Wilderness Area be referred to as a "State Defined Class I Area", and the phrase "PSD Class II Area" be changed to "Class II Area". The revised language proposal would apply to the 2nd sentence in this bullet.

20 **Page 1, 4th Paragraph, 2nd Sentence**
Reference comment on DEIS for page 3-6, Section 3.1.2, 3rd paragraph for discussion of the Savage Run Wilderness Area as a Class I Area. The Division suggests that in this paragraph the Savage Run Wilderness Area be referred to as a PSD Class I Area and that the following sentence should be inserted as the 2nd to last sentence in the paragraph.
"Although the Savage Run Wilderness Area is not a federally mandated PSD Class I area, it has the legal requirement to be managed as a PSD Class I area through the Wyoming Air Quality Standards and Regulations."

The Division also suggests that remainder of the document, with the exception of the air quality related value impact sections, be modified to reflect the Savage Run Wilderness Area as a PSD Class I Area instead of a PSD Class II Area.

Letter 91 - Darla Potter, Wyoming Department of Environmental Quality/Air Quality Division, Page 6

Clare Miller, BLM
Continental Divide Project
Page 6

WDEQ - AQD Comments
June 24, 1999

21 **Page 1, Last Paragraph, 4th Sentence (going onto page 2)**
The Air Quality Division does not examine "project-wide" (as in Continental Divide/Wamsutter II Natural Gas Project) air quality impacts on permit applications submitted to the Division. Please reword this sentence to read
"...examine air pollutant emission source air quality impacts."

22 **Page 1S, Last Paragraph, Last Sentence**
This statement is incorrect as the WDEQ-AQD continues to issue new source review air pollutant emissions permits on a daily basis. The Division suggests modifying the sentence to read
"...facilities during the July 1, 1993 through April 30, 1998 time frame in the air quality;.."

23 **Page 2S, Table 5.1 and Page 3S, Table 5.6 and Page 4S, Table 5.12**
As of 10/15/98 Section 8 of the Wyoming Air Quality Standards and Regulations was revised to be consistent with the Federal ozone standards (EPA promulgated a revised ambient ozone standard on 7/18/97). The revision eliminated the State's 1-hour ozone standard and instituted an 8-hour ozone standard of 160 µg/m3.

24 **Page 3S, Section 5.1.4**
Please disclose what receptor grid was used for the HAPs analyses in both text as well as figure.

25 **Page D1-1, 1st Paragraph, 2nd Sentence**
The first part of this sentence is incorrect. Section 21(b) of the Wyoming Air Quality Standards and Regulations states that a facility has 24 months to commence construction after approval to construct or modify (i.e. permit issuance). The exception to this 24 month time frame is only for a permit issued using a case-by-case MACT determination for which 18 months to commence construction is allowed. Please revise this sentence to read
"In Wyoming, a facility typically has 24 months to..."

Comments on Air Quality Technical Support Document -- Volume II

26 **Page 1, 2nd Paragraph, 2nd Sentence**
Reference comment on DEIS for page 3-6, Section 3.1.2, 3rd paragraph for discussion of the Savage Run Wilderness Area as a Class I Area. The Division suggests that in this paragraph the Savage Run Wilderness Area be referred to as a PSD Class I Area and that the following sentence should be inserted as the 2nd to last sentence in the paragraph.
"Although the Savage Run Wilderness Area is not a federally mandated PSD Class I area, it has the legal requirement to be managed as a PSD Class I area through the Wyoming Air Quality Standards and Regulations."

The Division also suggests that remainder of the document, with the exception of the air quality related value impact sections, be modified to reflect the Savage Run Wilderness Area as a PSD Class I Area instead of a PSD Class II Area.

Letter 91 - Darla Potter, Wyoming Department of Environmental Quality/Air Quality Division, Page 7

Clare Miller, BLM
Continental Divide Project
Page 7

WDEQ - AQD Comments
June 24, 1999

27 Page 3, 1st Full Sentence
The Division finds it troubling to see references to the use of Southwest Wyoming Technical Air Forum (SWWYTAF) modeling techniques, for the reasons stated in the comment below.

28 Page 5 & 6 and Tablet A-2 & A-4
Due to the relative difference in base elevation for source groups 2 and 4,
- How can the sources in Group 2 and Group 4 be modeled together?
- How were the modeled sources combined for the cumulative impacts?
- How were the combined impacts post-processed in CALPOST?
- How were the contributions from each group (1-5) separated in the model simulations?

29 Page 26, Last Paragraph, 2nd Sentence
The Division finds it troubling to see references to the eased data collection efforts and simplified MM5 modeling activities due to the overlap with the SWWYTAF modeling period. This statement suggests that information developed for SWWYTAF was used by the BLM and Earth Tech Inc. in performing the modeling for the Continental Divide/Wamsutter II EIS. If indeed SWWYTAF information has been utilized, it is inappropriate since the information and modeling has not yet been finalized, nor has WDEQ authorized the release of the information for any purpose.

30 Page 28 - 31
These pages describe Visibility Calculation Methods 2 and 4. Are there visibility calculation methods 1 and 3? If yes, why weren't these calculation methods and corresponding results disclosed to the public in the Air Quality Technical Support Document?

31 Page 33, Section 5.2, 1st Paragraph, 2nd to Last Sentence
This sentence fails to mention that the USFS Limit of Acceptable Change (LAC) should be compared to impacts to the best visibility (i.e. mean of the cleanest 20%) days.

32 Page 33, Section 5.2, 1st Paragraph, Last Sentence
The Division proposes that BLM differentiate between and disclose the difference between being a Federally designated Class I Area and a PSD Class I Area. The suggested language for modifications and an additional sentence to the paragraph follows.

"...visibility in Federally designated Class I Areas, which are different from PSD Class I Areas, the goal...applicable in redesignated Class I Areas. State defined Class I Areas, nor Class II Areas. Therefore, throughout the discussions of air quality related value impacts the sensitive areas are referred to as Federally designated Class I Areas, State defined Class I Areas, and Class II Areas. There are no applicable Colorado, Wyoming, or Federal visibility standards. "

The Division then proposes that throughout the rest of the document when discussing Air Quality Related Values (AQRVs) that the phrase "PSD Class I Area" be changed to "Federally Designated Class I Area", the Savage Run Wilderness Area be referred to as a "State Defined Class I Area", and the phrase "PSD Class II Area" be changed to "Class II Area".

Letter 91 - Darla Potter, Wyoming Department of Environmental Quality/Air Quality Division, Page 8

Clare Miller, BLM
Continental Divide Project
Page 8

WDEQ - AQD Comments
June 24, 1999

33 Page 39, 3rd Paragraph
The USFS Limit of Acceptable Change (LAC) should be compared to impacts to the best visibility (i.e. mean of the cleanest 20%) days. Therefore the comparison of the "method 4" results to the USFS LAC is misleading.

34 Appendix A
What was the basis for the NO_2/NO_x ratio of 14.56?

35 Appendix B, Pages B-1 - B-4
This source aggregation method was not proposed in the 9/28/98 protocol. The Division has several questions regarding the source aggregation method, as this one component of the analysis (source aggregation) may introduce a potential for errors that can not easily be found or understood.
- How were the sigma y values calculated for the aggregated sources ?
- Should the sigma y values be limited to the 4 km dimension of the CALPUFF grid cells ?
- Why is the source aggregation using point sources preferable to grid-cell sized area sources ?
- How can the original source plume characteristics be verified in the aggregated sources ?
- What is the priority sequence of criterion used to determine acceptable pairing of any given sources with respect to similar stack parameters, &c, *and ? ?*

7.2.91.2 Letter 91 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

Comment Response 1 - Please see FEIS Section 7.2.79.2, Comment Response 12.

Comment Response 2 - Please see Comment Response 8, below.

Comment Response 3 - Please see FEIS Section 7.2.79.2, Comment Response 4.

Comment Response 4 - Please see Comment Response 27, below.

Comment Response 5 - As described in FEIS Section 7.2.79.2, Comment Response 10, in a few instances, based on unforeseen circumstances after the Final Protocol was issued (on September 28, 1998), the BLM modified the air quality impact assessment procedures. These changes are described in the Revised Air Quality Impact Assessment Technical Support Document (BLM 1999d) and were discussed at a preliminary results presentation for the BLM's Wyoming State Director (held February 16, 1999). While holding additional advisory stakeholder team meetings between September 8, 1998, and February 16, 1999, may have alleviated some individual stakeholder team member concerns, the BLM determined that additional meetings were not necessary to complete its air quality impact assessment obligations under NEPA.

Comment Response 6 - Please see Comment Response 8, below.

Comment Response 7 - Please see FEIS Section 7.2.79.2, Comment Response 12.

Comment Response 8 - The FEIS text (Section 3.1.2, Air Quality and Table 3.6) and the Revised Air Quality Impact Assessment Technical Support Document text (Volume I - Tables 5.1, 5.6 and 5.13) have been revised to clearly indicate the new ozone standard.

Comment Response 9 - The FEIS text (Section 4.1.1.1 Proposed Action and 4.1.1.6 Cumulative Impacts) and the Revised Air Quality Impact Assessment Technical Support Document text (Executive Summary and 1.0 Introduction) have been revised as recommended.

Comment Response 10 - The FEIS text (Section 4.1.1.5 Mitigation and Monitoring) has been revised to clearly indicate that most of the proposed NO_x emission sources would not be included in the existing tracking agreement and that either a mutually acceptable revision or a separate agreement would be required to include those proposed emission sources.

Comment Response 11 - Since the Air Quality Impact Assessment analyzed potential visibility impacts at both PSD Class I and Class II sensitive areas, and the DEIS (Page 4-20) clearly stated "there is no applicable state or federal regulatory visibility standard," the FEIS text has not been revised. However,

both the FEIS text and the Revised Air Quality Impact Assessment Technical Support Document text have been revised to clarify the status of the Savage Run Wilderness Area. Please also see Comment Response 32 below and FEIS Section 7.2.79.2, Comment Response 12.

Comment Response 12 - The USFS has requested that all NEPA analyses be compared to their "½ of a just noticeable change" 0.5 deciview Limit of Acceptable Change.

Comment Response 13 - The FEIS text (Section 4.1.1.6 Cumulative Impacts) has been revised to clearly indicate that a reduction of NO_x emissions from existing sources in southwestern Wyoming is anticipated, primarily due to the installation of additional control devices on the Naughton coal-fired electrical generation facility.

Comment Response 14 - The FEIS text (Section 4.1.1.6 Cumulative Impacts) has been revised to indicate SWWYTAF is developing a secondary organic aerosol model, but it is not currently available for use.

Comment Response 15 - Please see Comment Response 9, above.

Comment Response 16 - Please see Comment Response 9, above.

Comment Response 17 - Please see FEIS Section 7.2.79.2, Comment Response 12.

Comment Response 18 - Please see Comment Response 12, above.

Comment Response 19 - Please see FEIS Section 7.2.79.2, Comment Response 12.

Comment Response 20 - Please see FEIS Section 7.2.79.2, Comment Response 12.

Comment Response 21 - Please see Comment Response 9, above.

Comment Response 22 - The Revised Air Quality Impact Assessment Technical Support Document text (Volume I - 2.5 Emissions Inventory - Cumulative Emissions Sources) has been revised as recommended.

Comment Response 23 - Please see Comment Response 8, above.

Comment Response 24 - As clearly described in the Air Quality Impact Assessment Technical Support Document text (Volume I - 5.1.4 HAP Impacts), "Short-term concentrations were modeled at receptors spaced within 100 m of the well sites and compressor station permit boundary, which represents the closest location any individual would be for an entire 8-hour period. The long-term HAP modeling assumes that the nearest residence is 4,000 m away from the gas plant and compressor facility, and 500 meters from the nearest well." In addition, Figures 5.3 through 5.6 have been added to the Revised Air Quality Impact Assessment Technical Support Document text (Volume I - 5.1.4 HAP Impacts) to show the HAPs modeling receptor grids.

Comment Response 25 - The Revised Air Quality Impact Assessment Technical Support Document text (Volume I - Appendix D1) has been revised as recommended.

Comment Response 26 - Please see FEIS Section 7.2.79.2, Comment Response 12.

Comment Response 27 - The overlap of the CALPUFF modeling domains and the use of the same modeling techniques in both studies was very clearly and openly discussed at the protocol meeting with WDEQ-AQD's full knowledge and participation. In addition, the WDEQ-AQD gave the BLM written permission to release the MM5 data produced under the SWWYTAF study (Olson 1998). Given the location and nature of both modeling studies, it is not surprising that some of the same information was used in both studies. However, no proprietary SWWYTAF information was used in the CD/WIIPA air quality impact analysis.

Comment Response 28 - As clearly described in the Air Quality Impact Assessment Technical Support Document text (Volume II - 2.0 Emissions Inventory), "The source inventory has been divided into five source groups for the far-field modeling." Source Group 2 and Group 4 were not modeled together. Each of the five source groups were modeled separately using five CALPUFF runs. The partial plume path terrain adjustment factor allows source puffs to be emitted at one terrain elevation yet impact receptors at another terrain elevation. Following the completion of the CALPUFF modeling, the five source group concentration files were combined (cumulative impacts) at each receptor using Earth Tech's post-processing software. To determine contributions from each of the source groups, six separate CALPOST runs were made (one for each source group and the combined total cumulative analysis).

Comment Response 29 - Please see Comment Response 27, above.

Comment Response 30 - Method 1 is the original, Phase I IWAQM methodology. It has been replaced by method 2.

Method 2 uses the mean of the 20% cleanest seasonal visibility conditions (extinction values reconstructed from two IMPROVE 24-hour fine particulate mass concentration samples per week), which were assumed to occur on every day during an entire season (a conservative assumption in predicting the frequency of visibility impacts). This method therefore inherently separates the meteorological conditions which occurred in determining the "cleanest" background, and those conditions applied in the modeling analysis. Unlike the IWAQM protocol, the analysis performed for this EIS limited observed relative humidity levels to 90% (e.g.; 91-99% values were set to 90%).

Method 3 is the same as method 2, except predicted impacts are eliminated whenever the relative humidity (RH) exceeds the maximum allowed (RHMAX), rather than capping the RH at RHMAX, as in method 2.

Method 4 compares directly observed hourly extinction values measured with an IMPROVE transmissometer, with hourly modeled extinction values calculated from the predicted primary and secondary particulate matter concentrations, adjusted for hourly relative humidity levels, interpreted on a daily basis.

There is also a method 5, which is the same as method 4 except that it uses IMPROVE nephelometer data rather than transmissometer data.

Comment Response 31 - Please see Comment Response 12, above.

Comment Response 32 - The FEIS text (Section 3.1.2 Air Quality) has been revised to indicate that there are no applicable hazardous air pollutant, visibility impairment, or atmospheric deposition (acid rain) standards and that the existing "reasonably attributable" and new "regional haze" visibility impairment regulations apply only within federal Mandatory PSD Class I areas. In addition, both the FEIS text and the Revised Air Quality Impact Assessment Technical Support Document (BLM 1999d) have been revised to clarify the status of the Savage Run Wilderness Area as recommended. Please also see FEIS Section 7.2.79.2, Comment Response 12.

Comment Response 33 - Please see Comment Response 12, above.

Comment Response 34 - The impact analysis assumed that 10% of the emitted NO_x is NO_2 and 90% is NO. It was also assumed that the emitted NO_x in the emissions inventory is proportionately weighed as NO_2.

For example, if the NO_x emission rate is 10 g/s, the NO and NO_2 emission rates will be:

$NO_2 = (0.10)(10\ g/s) = 1\ g/s$

$NO = (0.90)(10\ g/s)(30/46) = 5.87\ g/s$

where 30 is the molecular weight of NO and 46 is the molecular weight of NO_2. It should be noted that CALPUFF accounts for the molecular weight differences in converting NO to NO_2, so the 5.87 g of NO will produce $(46/30)(5.87\ g) = 9.0\ g$ of NO_x. Thus matching the original emission rate weighed as NO_2, and providing a NO_2/NO_x ratio of 14.56% (1 g/s of NO_2 to 6.87 g/s of NO_x).

Comment Response 35 - The Air Quality Impact Assessment Technical Support Document (Volume II - Appendix B: Source Aggregation Method) described how the sigma-y values were calculated for the aggregated sources. The discussion on page B-2 presents the formulation for computing the position (X) and the variance (VAR) of a source that is produced by combining two previously aggregated groups. This is the process that is actually repeated many times in the algorithm because the aggregation process is built upon bringing pairs of source-groups together until the distance between the resulting sources exceeds an imposed criterion (note that this distance criterion is related to the distance of a source from the nearest receptor). A particular source (aggregated or not) is paired only once per pass through the list of sources, and new passes are initiated only if at least one aggregation event was performed in the last pass completed. At the start of each pass, each aggregated source is characterized by a location and a variance (sigma-y squared), but the original location of each source in an aggregation is not retained. After all passes are completed, each of the remaining sources is placed at its final position and given an initial sigma-y that is equal to the square root of the final variance. In this analysis, all sources that are aggregated have identical stack parameters (excluding location), so issues related to the selection of effective temperature, diameter, height, etc., do not arise.

Regarding limiting sigma-y values to 4 km, the intent of the aggregation process is to replace many point sources with fewer point sources in such a way that distant impacts (concentrations) remain adequately characterized. Once plumes from many point sources overlap significantly, perturbations in source locations have a reduced influence on the total concentration field, and fewer sources with proportionally larger emission rates and greater separation distances can be used (other source characteristics being equivalent). The initial sigma-y given these aggregated sources should reflect the scale over which the sources have been combined, rather than the size of the modeling grid cell, so a cap of 4 km (grid cell) would not be appropriate. There is no such cap on the growth of sigma-y within CALPUFF.

By using an aggregated point source rather than grid-cell sized area sources, the treatment of the plume rise is explicitly retained. If an area source were used, the final rise and initial sigma-z could not be replicated. Also, the area source algorithm is designed to address the near-field concentration distribution due to a distributed source. In the far-field, such details are moot, and an equivalent point source may be used.

The original source plume characteristics can be verified with the aggregated sources control file. The point sources combined in this application have identical stack parameters. These are passed on to the CALPUFF control file with one modification: the emission rate is the sum of the emission rate from each of the sources included in an aggregated source. In addition, an initial sigma-y is used to characterize the lateral size of the emitted puffs. Therefore, the control file documents the stack parameters that are used, and these can be verified against the original source parameters.

No priority sequence is used to determine acceptable pairing of any given sources. As stated above, the sources that are candidates for aggregation have identical stack parameters in this application, so the issue of similar stack parameters (R_0 and f) does not arise. Therefore, the process of pairing sources into aggregates involves two primary procedures. In the first, sources are placed into bins based on the distance to the nearest receptor. Sources are not combined across bins. In the second, sources are paired in successive passes based on the distance between the pair. As aggregates are produced, the distance between them typically increases so that the distance criterion is eventually reached for an aggregated source and it becomes one of the final source aggregates.

The parameters R_0 and f define the bin boundaries, where the metric is distance to the nearest receptor. The thickness of a bin increases with the distance to the nearest receptor. This bin thickness is used to set the distance criterion for pairing. As

described in the Air Quality Impact Assessment Technical Support Document (Volume II - Appendix B: Source Aggregation Method, page B-2), sources within a bin may be paired only if the distance between them does not exceed 0.71 times the bin thickness.

The example result displayed in Figure 1 of the Air Quality Impact Assessment Technical Support Document (Volume II - Appendix B: Source Aggregation Method, page B-5) illustrates how the binning influences the aggregation. The final aggregated sources appear organized in lines that are parallel to the line of receptors. Those lines nearer the receptors have a shorter distance between the aggregated sources than do those that are far from the receptors. This is due to the smaller bin thickness used for sources that lie nearer the receptors.

7.2.92.2 Letter 92 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

Comment Response 1 - Please see FEIS Section 7.2.58.2, Comment Response 1.

Comment Response 2 - The BLM will certainly take into consideration existing conditions at locations that are closed to development due to seasonal limitations. Such exceptions are provided for in the DEIS.

Comment Response 3 - The ROD for this project will identify all required mitigation measures. Additional potential BLM-required mitigation may be necessary to limit impacts due to oil and gas development. The BLM wants Operators and the public to know what additional mitigations may be required.

7.2.92.1 Letter 92 - Timothy R. Morris, Santa Fe Snyder Corporation

Santa Fe Snyder Corporation

June 30, 1999

Mr. Clare Miller
Bureau of Land Management
1300 N. Third St.
Rawlins, Wyoming 82301

Via Facsimile (307) 328-4224

Re: Draft Environmental Impact Statement Comments
Continental Divide/Wamsutter II EIS Project
Carbon and Sweetwater Counties, Wyoming

Gentlemen:

Santa Fe Snyder Corporation ("SFS") offers the following comments for the Bureau of Land Management's communication regarding the Continental Divide/Wamsutter II Draft Environmental Impact Statement ("DEIS").

1. Proposed Action versus Alternatives A and B. The DEIS does not demonstrate significant impacts to any resources by the Proposed Action with the "Applicant-Committed Measures" contained in Chapter 2. The Proposed Action should be the alternative selected in the Record of Decision.

2. Air Quality. The DEIS air quality impact assessment for the proposed action predicted impacts below applicable regulatory limits. The assessment uses conservative assumptions including:

   1) All 3000 wells spending simultaneously;
   2) Compressor exhaust rates of 2 grams per horsepower-hour (versus 1 gram per horsepower-hour presently being permitted); and
   3) All other cumulative emission sources were assumed to operate at their maximum emission rates simultaneously throughout the life of the project.

   No further mitigation should be required with regard to air quality other than Applicant-Committed measures contained on page 4-12.

3. Wildlife. Existing wildlife stipulations practically shut down drilling activities for one-half of each year (February 1 to July 31) and three-quarters of the year (November 15 to July 31) if the property is within a Crucial Winter Range. Operators do believe that conditions reasonably change and will appreciate the BLM's continued monitoring efforts to grant exceptions if a nest or lek is no longer active or if a winter appears not to be particularly harsh.

4. Applicant-Committed Measures. The DEIS does not find any significant adverse impacts to any resources from the Proposed Action with the "Applicant-Committed Measures. The "Applicant-Committed Measures" go beyond legal requirements and demonstrate good faith environmental sensitivity. Throughout Chapter 4 of the DEIS the "Applicant-Committed Measures" are documented to be sufficient to protect resources and the "Additional Potential BLM-Required Mitigation" are not necessary.

SFS looks forward to a Record of Decision in the near future that will allow resumed activity in a highly productive area for the first time on federal lands since the fall of 1997. Thank you for the opportunity to review this DEIS. If you should have any questions, please advise.

Very Truly yours,

Timothy R. Morris, C.P.L.
Division Manager, Land

RECEIVED
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RAWLINS FIELD OFFICE

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7.2.93.1 Letter 93 - Cynthia Cody, U.S. Environmental Protection Agency

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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VIA FACSIMILE AND MAIL

Clare Miller, EIS Team Leader
Rawlins Field Office
Bureau of Land Management
P. O. Box 2407
Rawlins, WY 82301-2407

Re: EPA Comments on DEIS for Continental Divide/Wamsutter II Natural Gas Project

Dear Mr. Miller:

In accordance with our responsibilities under the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act (CAA), Region VIII of the U. S. Environmental Protection Agency (EPA) has reviewed the Draft Environmental Impact Statement (DEIS) for the Continental Divide-Wamsutter II Natural Gas Project. Based on that review, EPA has prepared comments that should be addressed in the Final Environmental Impact Statement (FEIS).

This DEIS analyzes the potential environmental impacts of expanded natural gas exploration and development in the Continental Divide/Wamsutter II Project Area (CD/WIPA) located in Sweetwater and Carbon Counties, WY, approximately 25 miles west of Rawlins. The proposed project has been defined by Amoco Production (Amoco), Union Pacific Resources Company (UPRC), Yates Petroleum Corporation (Yates), Snyder Oil Corporation (Snyder), and other companies. The project area covers approximately 1,061,200 acres (531,400 Federal, 9,800 state, 520,000 private surface). The mineral ownership within the CD/WIPA is 49% Federal and 55% private/state. The anticipated maximum field development includes drilling and developing up to 3,000 wells on 3,000 locations, construction of 1,500 miles of roads, construction of 1,500 miles of new pipeline and construction of other ancillary facilities including five compressor stations, a gas processing plant, ten evaporation ponds, five produced water disposal wells, and 50 water wells. The

Letter 93 - Cynthia Cody, U.S. Environmental Protection Agency, Page 2

existing oil and gas operations in the project area include 720 oil and gas wells, 1,900 miles of roads, 280 miles of pipeline right-of-way, and 500 acres of surface disturbance due to ancillary facilities, including a gas processing plant, pumping stations, evaporation ponds, and staging areas.

The DEIS evaluates four alternative actions: 1) Companies' Proposed Action; 2) Alternative A, 14 acre maximum surface disturbance in sensitive resource areas; 3) Alternative B, 30 acre maximum surface disturbance in sensitive resource areas; and 4) No Action. Sensitive resource areas (SRAs) include areas with stabilized sand dunes, raptor nesting areas, crucial habitat, cultural resource sites, residential areas, and Visual Resource Areas. The No Action alternative is defined on page 2-8 and would deny the current development proposal. But, selection of the No Action alternative would allow the existing levels of development activity to continue.

Potential Impacts and Mitigation. The Continental Divide DEIS provides a comprehensive picture of the potential impacts associated with natural gas development in this area of Wyoming. Table 2.6 on pages 2-38 to 2-54 provides a summary of impacts categorized by environmental resource and development activities. This Table 2.6 and Chapter 4, Environmental Consequences, assume the effective implementation of project-wide environmental protection and mitigation measures presented in Section 2.6.13 on page 2-30. The method to assure compliance with mitigation measures relies on an Operator representative to consult with BLM on a case-by-case basis as necessary. There are a number of potentially significant impacts referenced in Table 2.6 and Chapter 4 after assuming effective implementation of environmental protection and mitigation measures, including reactivitation of stabilized sand dunes, loss of proper functioning of surface water resources, increased noise levels, loss of raptor productivity, displacement and stress on wildlife, potential displacement of rural residents, and modification of visual resources. EPA recommends that BLM develop an Adaptive Environmental Management Plan (AEMP) to be incorporated into the Final EIS (FEIS) as a method of verifying implementation, measuring the success rate of proposed measures, and making appropriate modifications to mitigation measures based on actual performance. This AEMP concept is discussed further in our attached detailed comments. 1

Air Quality Concerns. We are pleased that a comprehensive air quality analysis of gas development projects, including Continental Divide/Wamsutter II and South Baggs was prepared to disclose the potential direct, indirect, and cumulative impacts of these projects and other emission sources in the cumulative impact assessment area. The cooperative effort of preparing an analytical protocol was very useful in ensuring multi-interest participation. Because of the significance of this Continental Divide modeling work in relation to the Southwest Wyoming Technical Air Forum air modeling protocol, the

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Continental Divide Air Quality Technical Report and the CALMET/CALPUFF model application must be technically sound. We have some concerns about the assumptions and methods used in the modeling as noted in the attachment. These concerns have already been discussed with BLM in a conference call on July 20, 1999. After reviewing the DEIS, the Air Quality Assessment Technical Support Document and the modeling files for the Far-Field Analysis, it is apparent that some visibility degradation in Class I Areas of the modeling domain will occur due to emissions from the gas well development at Continental Divide/Wamsutter II and South Baggs. The actual amount of degradation to be expected is unknown at this time due to the need for clarification of assumptions and methods. However, on page 37, Table S-6 of the Air Quality Technical Support Document (Far-Field Analysis) indicates that potential visibility degradation at greater than 0.5 deciview level ranges from 8 days at the Bridger-Teton Wilderness to 1 day at the Fitzpatrick Wilderness. This range of potential impairment of visibility in Class I areas is not fully discussed in the DEIS. Instead the DEIS uses Table S-6 from the Air Quality Technical Report as the basis for the air quality discussion in the DEIS. This Table S-6 appears in the DEIS as Table 4.6 and is the proponents's preferred method of displaying the potential visibility degradation. This Table 4.6 presents the minimum number of days of potential degradation. 2

Because of the potential for visibility degradation in Class I Areas, the cost and effectiveness of mitigation measures needs to be addressed in the Final EIS. Section 4.1.1.5 in the DEIS does address types of mitigation; but there is no information about cost or effectiveness of this mitigation. The public and the decision-maker have insufficient information to support a decision on mitigation measures to offset potential degradation of visibility due to gas development in this part of Wyoming. As noted above, mitigation measures selected to address air quality concerns should also be monitored, evaluated, and modified under a formal Adaptive Environmental Management Plan (AEMP). 3 4

Rating. Based on EPA's national rating system, the Continental Divide DEIS will be listed in the Federal Register as category EC-2, Environmental Concerns, Insufficient Information. This rating means that EPA has identified environmental concerns with the potential impacts of the proposed project and the mitigation measures.

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Thank you for the opportunity to review and comment on the Continental Divide/Wamsutter II Natural Gas Project DEIS; we appreciate the two-week extension of the comment deadline. Attached are detailed comments for your consideration in preparation of the FEIS. If you have any questions about our comments on this DEIS, please call me at (303) 312-6228, or Mike Strieby, the Project Review Coordinator, at (303) 312-6002.

Sincerely,

Cynthia Cody, Chief
NEPA Unit
Ecosystem Protection Program

Enclosure

cc: Larry Svoboda, EPA
John Noter, NPS
Tamara Blett, USDA-FS
Elaine Suriano, EPA, OFA

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EPA REGION VIII COMMENTS
ON THE
DRAFT ENVIRONMENTAL IMPACT STATEMENT
FOR THE CONTINENTAL DIVIDE/WAMSUTTER II PROJECT
ORIGINAL SENT BY FAX JULY 15, 1999
REVISED AFTER DISCUSSION WITH BLM ON JULY 20, 1999

ADAPTIVE MANAGEMENT

Rather than depend on a communication process between BLM and Operators to ensure adequate mitigation measures are implemented for the Continental Divide/Wamsutter II project, EPA recommends that BLM develop a formal Adaptive Environmental Management Plan (AEMP) to be included in the FEIS as the method to verify the efficacy of proposed mitigation measures.

An AEMP is a process to increase the speed at which managers learn from their decisions about resources and how development activities affect them. The process generally consists of several basic steps including: a) defining the natural resource protection objectives; b) identifying the unimpacted and sustainability thresholds; c) monitoring of ecosystem responses to generate feedback; d) using past experience; e) including multiple stakeholders; f) documenting information and actions; and g) adjusting management practices based on learning experiences. For further information on AEMP, please see R. A. Carpenter, "The Case for Continuous Monitoring and Adaptive Management Under NEPA", in Environmental Policy and NEPA, R. Clark and L. Canter, ed., St Lucie Press, 1997, pages 163-180. 5

We understand that an AEMP can have differing levels of effort and costs. Generally, there are three possible options including reactive, passive, or active. The following is a suggested budget and organization outline for three different levels of AEMPs:

A) "Reactive Management" Plan, the least cost option:

Organizational Arrangements. Establish one intra-agency technical work group consisting of BLM and cooperating agencies' scientists and natural resource economists.

Process. Provide a small budget and resources needed to monitor selected key ecosystem indicators managed by the intra-agency work group.

Independent Science Review. Proposed plans and actions could be made available to various stakeholders. These stakeholders could acquire

Letter 93 - Cynthia Cody, U.S. Environmental Protection Agency, Page 6

independent scientific review and provide this information to the intra-agency work group.

Public Access and Review. Provide key documents in draft form to interested stakeholders.

B) "Passive Management" Plan, next mid-level cost option:

Organizational Arrangements. Establish two technical work groups: 1) An intra-agency technical work group of BLM and cooperating agencies' scientists and natural resource economists; and 2) An extra-agency work group of independent scientists and natural resource economists.

Process. Make various management documents including monitoring of environmental conditions and proposed resource management plans available for scientific review when developed in a draft stage. Direct the extra-agency scientists work group to independently propose monitoring of unspoiled conditions and means to determine if such conditions remain unspoiled.

Independent Science Review. Seek pro-bono peer review to be managed by the Natural Resources Committee of the National Academy of Sciences. Provide budget for work of the extra-agency science work group.

Public Access and Review. Provide key documents in draft form to interested stakeholders and hold infrequent public meetings at critical decision points.

C) "Active Management" Plan or the high cost option:

Organizational Arrangements. Establish three technical work groups: 1) An intra-agency technical work group of BLM and cooperating agencies' scientists and natural resource economists; 2) An extra-agency work group of independent scientists and natural resource economists; and 3) A science center of contracted specialists in the environmental sciences and the natural resource economists.

Process. Make various management documents including monitoring of environmental conditions and proposed resource management plans available for scientific review when developed in a draft stage. Direct the extra-agency scientists' work group to independently propose monitoring of unspoiled conditions and means to determine if such conditions remain unspoiled. Assure the science center staff conducts academically

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8 does excluding a data point on an exceedance day contribute to adequate characterization of conditions and impacts?

9 3. Page 39, "Number of Invalid Days". As shown in this Table, the number of invalid days for the transmissometer data was approximately 25% of the year. This information should be included in the FEIS as a factor that could lead to an underestimation of potential impacts.

CALMET/CALPUFF MODELING CONCERNS

10 4. MM5 Predicted and Observed Precipitation Data. The CD/WII DEIS documentation states that both observed and MM5 predicted precipitation data were used in CALMET to generate the precipitation fields. The MM5 precipitation patterns and amounts likely don't match the observed values. Specifying both of these data sources as input to CALMET can potentially result in double counting of the precipitation. This would overstate the wet scavenging of pollutants and understate the concentration and visibility impacts at sensitive receptor areas. If MM5 predicted precipitation estimates are to be used, then they must be evaluated against the observed values to justify their use.

11 5. Kinematic Effects Treatment. The CD/WII DEIS CALMET modeling did not specify the option to treat kinematic effects such as blocking, deflection and channeling of wind flow by complex terrain. Please provide justification for the failure to consider these effects in the CALMET model.

12 6. Incomplete Meteorological Database. The CD/WII CALMET modeling used less than half the available observed surface meteorological data for the study area. Such data are available in the SWWYTAF database prepared by Air Resources Specialist for CALMET modeling. The Remote Automatic Weather Station (RAWS) and the Wyoming Department of Transportation sites were excluded. The justification was that these data were not collected for the specific purpose of modeling. However, such data were used in the Mount Zirkel Visibility Study and other CALMET modeling studies in the region. The standard National Weather Station (NWS) data used in the CD/WII DEIS CALMET modeling were not collected for modeling. The CD/WII DEIS CALMET modeling should use all data available and provide specific, defensible rationale for any data exclusion.

13 7. Puff Splitting. One of the greatest technical limitations of CALPUFF for far-field modeling in complex terrain is using a constant wind to advect

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peer-reviewed reports on the effectiveness of mitigation measures to achieve the non-degradation and restoration objectives.

Independent Science Review. Obtain scientific peer review managed by the Natural Resources Committee of the National Academy of Sciences. Budget and implement the work of both the extra-agency science work group and the permanently established science center.

Public Access and Review. Provide key documents in draft form to interested stakeholders and hold frequent, perhaps quarterly, public meetings to maintain an ongoing interaction with the public in all aspects of managing the Continental Divide/Wamsutter II Gas Development Project.

We recommend that the Final EIS outline the various adaptive management options including strength and benefits of those options. The Preferred Alternative should contain the essence of an effective and efficient AEMP including the involvement of multiple stakeholders, available budgets, meeting frequencies, and the use of independent scientific review of mitigation measures. A selection of an AEMP should be announced in the Record of Decision.

AIR QUALITY

6 EPA has completed an analysis of the air quality modeling approach and results discussed in the Technical Report and DEIS. Regardless of methods selected (METHOD 2 or METHOD 4) to indicate the potential for visibility degradation in Class I Areas of the modeling domain, there is a high potential for degradation. Therefore, effective mitigation measures need to be defined to off-set this potential degradation. The following comments are specific to the Technical Support Document and the CALMET/CALPUFF Model.

Technical Support Document

7 1. Page 6, Winter Scaling Factor. The Winter Scaling Factor and the Non-winter Scaling Factors for the Jonah wells are significantly lower than for other fields. Please explain this difference and how the factor will affect well emissions.

8 2. Page 39, Third Paragraph. Please explain the reason for excluding the transmissometer data on exceedance day (Julian Day 146) at Bridger, Fitzpatrick, and Pope Agie. What type of "weather" was occurring ? How

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13 the puff despite the horizontal grid cell extent of the puff and wind variability in vertical layers. CALPUFF5 has a puff splitting algorithm to partly address this issue. During periods of high wind shear, the puff is split to allow two portions to be advected in different directions. The CD/WII DEIS does not use the puff splitting option. Please provide adequate justification for not using this option.

14 8. PM10 Dry Deposition. A geometric mean diameter of 10 microns with a 0 micron standard deviation was specified as input to CALPUFF for calculating PM10 dry deposition rates. PM10 species represents all particulate matter components from 0 to 10 microns. The treatment of all PM10 species as having a geometric mean diameter of 10 microns greatly overstates the average size of the PM10 particles. The particle size distribution can be estimated using EPA's "Compilation of Air Pollutant Emission Factors-AP-42", Chapter 13. Please provide justification for the use of a geometric mean diameter of 10 microns with a 0 micron standard deviation.

15 9. Background Ammonia. The CD/WII DEIS CALPUFF modeling used a background ammonia concentration of 10 ppb. High terrain ammonia measurements from the Mount Zirkel Visibility Study suggests that a maximum value of approximately 1 ppb is more appropriate. In addition, the Interagency Workgroup on Air Quality Modeling (IWAQM) Phase 2 Report suggests a background ammonia concentration of 1ppb for arid lands. Please provide a rationale for the use of 10ppb in modeling.

16 10. Relative Humidity. It appears that day-specific 200m vertically averaged relative humidity predictions from the MM5 model were used in both the METHOD 2 and METHOD 4 visibility calculations. If MM5 predicted relative humidity (RH) is used in the visibility assessment, it must be evaluated against the observed values to determine accuracy and appropriateness.

17 11. METHOD 2. This Method 2 for calculating visibility impacts is reported as a recommended IWAQM method. However, the CD/WII DEIS METHOD 2 approach used MM5 predicted 200m vertically averaged relative humidity values rather than IMPROVE site surface seasonal values recommended by IWAQM. Surface relative humidity will be higher than relative humidity aloft so the vertical averaging of relative humidity will understate the CALPUFF extinction estimation due to new sources.

7.2.93.2 Letter 93 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

Comment Response 1 - The BLM believes the procedures identified for monitoring, evaluation, review, and potential modification (e.g., changed mitigative actions) identified in the DEIS Reclamation Plan, Transportation Plan, and Wildlife Protection Plan (Appendices A, B, and D, respectively) provide for adequate adaptive environmental management for most, if not all, resources with the potential for significant impacts. The BLM does not believe an adaptive environmental management plan is necessary for air quality since no project-specific significant air quality impacts are anticipated, and in any event the BLM cannot implement specific air quality mitigations since we have no authority to do so. The following provides a brief summary of how the transportation, reclamation, and wildlife protection plans provide for adaptive environmental management.

The Reclamation Plan (DEIS Appendix A) involves components designed to protect or otherwise minimize impacts to many area resources including surface and ground waters, vegetation communities, wildlife, livestock grazing, recreation, and visual resources. The process to assure appropriate reclamation is provided in DEIS Figure A-1.1. While only the BLM and Operators are involved in evaluating reclamation success, the BLM believes the success criteria presented in DEIS Section A-6.3 are adequate and that reclamation success determinations do not require alternate agency and/or public involvement.

The transportation planning process as identified in DEIS Appendix B and the associated technical support document (BLM 1999a) involves components designed to protect virtually all area resources. A transportation planning committee (TPC) that includes BLM, Operators, state and county transportation departments, WGFD, landowners, grazing permittees, recreationists, and other interested parties has been established. Road development and closure planning in the CD/WIIPA will involve multiple entity involvement on an annual basis. Where potential problems can be identified prior to road development, road development plans may be changed. Furthermore, where problems are identified after roads have been constructed, the TPC will work to alleviate these situations. Public meetings have been identified as a method to assist in resolution of issues (see DEIS Table B-4.1).

The Wildlife Protection Plan (DEIS Appendix D) is designed to determine the extent of adverse effects occurring to sensitive wildlife resources, and in the event adverse effects are found, the plan calls for increased protection measures. Currently proposed techniques and associated responsibilities are shown in DEIS Tables D-2.1, D-2.2, and D-2.3, and the BLM believes these measures are adequate at this time. An annual review of wildlife monitoring techniques and data is provided (see DEIS Section D-2.1) and opportunities for alternate agency (e.g., WGFD, USFWS) as well as public review are provided.

The BLM believes that an adaptive environmental management program for surface water resources in the CD/WIIPA may be appropriate since no formal, project-specific surface water quality or quantity monitoring program currently exists. However, the BLM believes existing surface water protection measures coupled with transportation and reclamation planning as presented in this EIS would adequately protect these resources. Nonetheless, modifications have been made in this FEIS to allow for the potential to include an adaptive environmental management program for surface water resources. If requested by the EPA, the BLM would meet to further discuss the adaptive environmental resource management for this and other future projects.

Comment Response 2 - As clearly described in the DEIS text (Section 4.1.1.6 Cumulative Impacts), "A conservative visibility screening level analysis indicated that proposed project operations might result in a perceptible (1.0 deciview) visibility reduction on very clear days at several of the PSD Class I and II sensitive receptors, therefore a more refined potential visibility impact analysis was performed" and "As shown in Table 4.6, the refined visibility impact analysis predicted that a 'just noticeable change' greater than 1.0 deciview would occur on a single day at only the PSD Class I Rawah Wilderness Area. This predicted impact would not occur from the project sources or the 'No Action' sources alone, but from all sources combined (total cumulative sources)." The EIS further describes the USFS (Regions 2 and 4) visibility significance threshold of a 0.5-deciview Limit of Acceptable Change, and that based "on this more restrictive ½ of a 'just noticeable change' level, cumulative operations would exceed the USFS 'Limit of Acceptable Change' on a single day at both the PSD Class I Rawah Wilderness Area (1.69 deciview) and the [federal] PSD Class II Savage Run Wilderness Area (0.69 deciview). These predicted impacts would not occur from the project sources or the 'No Action' sources alone, but from all sources combined (total cumulative sources)."

The BLM conducted the very conservative, but much simpler, visibility screening analysis (method 2) to determine if potential visibility impacts within several sensitive receptors was possible. If no potential impacts were predicted using the very conservative method, then no further analysis was necessary. However, because the screening analysis did not preclude a potential for significant adverse visibility impacts and based on the BLM's experience in predicting potential visibility impacts in this region for previous NEPA assessments, the more refined potential visibility impact analysis (method 4) was performed.

The BLM provided a detailed description of both analyses' methods and results in a separate Air Quality Technical Support Document (BLM 1999b), which was available to the general public upon request during the DEIS comment period. Please also see FEIS Section 7.2.79.2, Comment Response 26.

All air quality impact assessment materials presented in the DEIS represent the BLM's "preferred method of displaying the potential visibility degradation" and not "the proponents'."

In addition, DEIS Table 4.6 does not present "the minimum number of days of potential [visibility] degradation." As clearly described in the DEIS text (Section 4.1.1.6 Cumulative Impacts), "In reviewing these predicted cumulative impacts, it is important to understand the 'reasonable, but conservative' assumptions made regarding potential resource development. In developing this analysis, there is uncertainty regarding ultimate development (i.e., number of wells, equipment to be used, specific locations). The analysis was also based on a 'reasonably foreseeable' development scenario, including several conservative assumptions." After detailing the conservative assumptions, the DEIS clearly concludes "Based on these numerous 'reasonable, but conservative' analysis assumptions, which may actually compound one another, the projected impacts represent an upper estimate of potential air quality impacts which are unlikely to actually be reached."

Comment Response 3 - The Revised Air Quality Impact Assessment Technical Support Document text (Volume I - 3.0 NO_x Mitigation) has been revised to include cost effectiveness information.

Comment Response 4 - As required by NEPA (40 C.F.R. 1502.16(h), the DEIS text clearly described "means to mitigate adverse environmental impacts," including applicant-committed mitigation, additional potential BLM-required mitigation, and other "mitigative opportunities" outside the jurisdiction of BLM's authority (Section 4.1.1.5 Mitigation and Monitoring). Although NEPA does require the lead agency (40 C.F.R. 1505.3(c)) "upon request, [to] inform cooperating or commenting agencies on progress on carrying out mitigation measures which they have proposed and which were adopted by the agency making the decision," actual mitigation selection and implementation, and the use of "a formal Adaptive Environmental Management Plan," are not required by NEPA. Mitigation measures (including monitoring) may be included by the decisionmaker in the ROD to reduce potential significant adverse impacts.

Comment Response 5 - Please refer to Comment Response 1, above.

Comment Response 6 - As clearly stated in the DEIS (Executive Summary, Page vi), "Since BLM approved activities must comply with all applicable local, state, tribal, and federal air quality laws, statues, regulations, standards, and implementation plans, significant adverse impacts to air quality are not anticipated to occur from implementation of any of the alternative actions." The technical basis for this conclusion was presented in the DEIS (Section 4.1.1. Air Quality) and the Air Quality Impact Assessment Technical Support Document (BLM 1999b).

The DEIS did not predict "a high potential for degradation" of visibility in sensitive areas, nor do "effective mitigation measures need to be defined to off-set this potential degradation." As clearly described in the DEIS text (Section 4.1.1.6 Cumulative Impacts), "A conservative visibility screening level analysis indicated that proposed project operations might result in a perceptible (1.0 deciview) visibility reduction on very clear days at several of the PSD Class I and II sensitive receptors, therefore a more refined potential visibility impact analysis was performed" and "As shown in DEIS Table 4.6, the refined visibility impact analysis predicted that a 'just noticeable change' greater than 1.0 deciview would occur on a single day at only the PSD Class I Rawah Wilderness Area." After detailing the conservative assumptions used in the refined visibility impact analysis, the DEIS clearly concluded "Based on these numerous 'reasonable, but conservative' analysis assumptions, which may actually compound one another, the projected impacts represent an upper estimate of potential air quality impacts which are unlikely to actually be reached." Please also see Comment Response 2, above, and FEIS Section 7.2.79.2, Comment Response 1.

Comment Response 7 - Scaling factors were initially developed to account for well heater operation schedules provided by the field Operators. In the case of Jonah II, Snyder Oil Company provided specific well heater operating cycle information. The dehydrator heaters were estimated to operate year-round, for at most 15 minutes per hour. The separator heaters were estimated to operate from October through April, for at most 15 minutes per hour. Scaling factors were used in the modeling to adjust full load emission rates to account for the heater operating schedules. Lacking similar specific operating cycle information, the dehydrator heaters in other well fields were assumed to operate year-round, for 30 minutes per hour, and separator heaters operated full time during the winter months (October – March).

In addition, the scaling factors developed for well heater schedules were used to adjust modeled well field emissions, based on the WDEQ-AQD recently permitted source inventory. Therefore, each set of scaling factors varies between each well field to account for sources that were included in the WDEQ-AQD emissions inventory.

Comment Response 8 - The Bridger transmissometer database includes the category "number of readings not in average due to weather." All 24 hours in Julian day 146 were excluded due to weather. There is no code indicating exactly what the weather was during that day although the relative humidity was at or above 93% for 17 hours. Since the measured visual extinction on day 146 is not known, then the refined visibility analysis (method 4) cannot be applied.

Comment Response 9 - As clearly reported in of the Air Quality Impact Assessment Technical Support Document text (Volume II -5.2 Visibility Impacts), "Any one-day and two-day gaps throughout the year are filled by interpolation of measured extinction values for the previous valid day and the following valid day. This brings the number of valid days of analysis for the Bridger Wilderness Area to 307 (267+16+14), and for Rocky Mountain National Park to 319 (276+19+24), providing nearly 84% and 87% data recovery, respectively."

In addition, Appendix E (a) - Daily Summary of Bridger Transmissometer Data indicated that approximately 65% (2,461 hours of the total 3,765) of the invalid hours were weather related for which no visibility impact analysis can be performed. Similarly, Appendix E (b) - Daily Summary of Rocky Mountain National Park Transmissometer Data indicated that approximately 93% (3,479 hours of the total 3,753) of the "invalid" hours were weather-related.

This compares to only a 47% valid 1995 nephelometer data recovery for the "Mt. Zirkel Wilderness Area Reasonable Attribution Study of Visibility Impairment" (Watson *et al.* 1996), where the instrument was not operated 23% of the year, 26% of the possible data were effected by weather (even including measurements up to 95% relative humidity), and nearly 4% other invalid data. The theoretical maximum data recovery for reconstructed extinction from IMPROVE fine particulate samplers is only 29% (two 24-hour samples per week).

The DEIS clearly used and reported the most complete and representative background optical data available to predict potential visibility impacts from the Proposed Action and alternatives. In addition, it is just as possible the missing 13 to 16% transmissometer data would not lead to an under-estimation of potential impacts as "could lead to an underestimation of potential impacts."

Comment Response 10 - The concern that using MM5 and observed data could lead to "double counting" of the precipitation (and therefore overestimation of the wet deposition) is not justified. The precipitation from MM5 was not added to the observed values. Rather, the data sets were merged in a way to give weight to the observed data in areas near the observational stations and to give weight to the MM5 data in areas where no observations were made. The MM5 data were adjusted to reflect the spatial patterns of precipitation in the PRISM (Parameter-elevation Regressions on Independent Slopes Model) data set, developed by Dr. Christopher Daly of Oregon State University (USDA-NRCS 1998).

Comment Response 11 - The CALMET simulations did include terrain effects such as slope flows (ISLOPE=1) and terrain channeling (Froude number) effects (IFRADJ=1). The kinematics effects option was not used (IKINE=0) in accordance with the recommended (default) model settings because this option may produce unrealistically high wind speeds in Layer 2 when relatively small grid sizes are used. Any fine-scale simulations with IKINE=1 could potentially contain inappropriate Layer 2 winds.

Comment Response 12 - The context in which the data were used must be considered. In this project, unlike the Mount Zirkel Visibility Study, hourly MM5 predictions on a 20-km grid were available to initialize the CALMET wind fields. As indicated in the Air Quality Impact Assessment Technical Support Document text (Volume II - 3.3 Meteorological Data Base), the QA/QC protocols followed at the secondary meteorological sites were less stringent than those required under EPA PSD monitoring guidelines (ARS 1997). There is also a question as to the siting of some of the monitors and the representativeness of the data relative to larger scale flow patterns. Although the data might be quite suitable for the purposes for which they were collected, they do not meet the requirements for modeling purposes. Rather than potentially degrade the wind fields by introducing potentially non-representative data into a relatively data-rich environment (due to the MM5 data), the secondary sites were not used.

Comment Response 13 - The general IWAQM recommended procedure is to exclude puff splitting. The puff splitting option is available to address special cases where there is evidence of important shear effects, but for the Proposed Action and alternatives, there is no reason to believe shear is important during the critical periods.

Comment Response 14 - The actual particle size distribution of the potential particulate matter emissions in unknown. In reviewing data for mining operations, the particle sizes varied significantly based on the type of operation and the meteorological conditions. The use of a 10 micron diameter is one limit of the possible range. It is possible to model a lower range as well and to put bounds on the uncertainty of the results due to this unknown factor. However, primary particulate matter was not a significant factor in the air quality impact analysis (including critical visibility events), so this detailed further analysis is not necessary.

Comment Response 15 - Because local ammonia monitoring data are not available, the CALPUFF default value of 10 parts per billion (ppb) ammonia was used in the analysis. This value is designed as a conservative assumption, favoring the formation of secondary particulate matter and resulting visibility impacts. Assuming only 1 ppb background ammonia could limit gas to particle conversion, and understate potential visibility impacts.

Comment Response 16 - The hourly relative humidity values used in the visibility calculations were derived from the nearest MM5 grid point to the receptor. A vertical average from the surface to 200 m above the surface was used in the calculations. Although no detailed comparison of the MM5 relative humidity predictions to the measured values was done, the qualitative patterns produced by MM5 are reasonable. Given the known deficiencies of the observed data (i.e., limited or no data collected in the higher terrain areas, near-surface values only, potentially missing data, etc.), the comprehensive MM5 data were determined to be appropriate. Please also see Comment Response 17, below.

Comment Response 17 - As clearly stated in the Air Quality Impact Assessment Technical Support Document text (Volume II - 4.3 Meteorological Modeling Options), "The relative humidity used to determine F_{all}, has been computed as a 200-meter vertical average of the humidity predicted at the nearest MM5 grid point to the receptor. This allows for terrain effects on relative humidity to be better evaluated than if surface-based relative humidity measurements at the NWS stations were used. The NWS stations tend to be located in flat areas at lower elevations than the sensitive areas of interest. The 200 m vertical average is intended as a compromise between the desire for a near-surface relative humidity value (reflecting the presence of the observer at the surface) and that for a vertical average to represent the distribution of the pollutants in the vertical sight path." Relative humidity measurements observed at the transmissometer location have the same limitation. This text also clearly stated "In CALPOST method 2, the hygroscopic component of the background is subject to the same relative humidity adjustment as the modeled primary and secondary particulate matter concentrations." Please also see Comment Response 16, above.

7.2.94.1

Letter 94 - Michael M. Long, Field Supervisor, U.S. Fish and Wildlife Service

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July 23, 1999

Memorandum

To: Team Lead, Continental Divide/Wamsutter II Gas Development Project, Bureau of Land Management, Rawlins, Wyoming

From: Field Supervisor, Ecological Services, Cheyenne, Wyoming

Subject: Continental Divide/Wamsutter II Gas Development Project Draft Environmental Impact Statement

We have reviewed the subject draft environmental impact statement (EIS) and provide the following comments pursuant to the National Environmental Policy Act (NEPA), and the Endangered Species Act of 1973, as amended (Act).

We understand the preferred alternative consists of gas field development including the development of up to 1,500 natural gas wells on Federal land, an additional 1,500 wells to be developed on private and State lands, 1,500 miles of new roads, 1,500 miles of new pipelines, and ancillary facilities in Carbon and Sweetwater counties, Wyoming. Alternative A is substantially the same with the exception of a surface disturbance limit of 14-acres per section of Federal surface in designated Sensitive Resource Areas (SRA's). Alternative B differs only in that the surface disturbance limit in SRA's is increased to 30 acres per section of Federal surface.

General Comments on the Draft EIS

1 We appreciate your efforts to reduce project impacts through the planning efforts contained in the Reclamation, Transportation, and Wildlife Protection plans. Once instituted, they will help reduce adverse environmental impacts associated with project development. While we recommend some changes in Alternative A, in its current form it is preferable to the Preferred Alternative. We strongly recommend Alternative A be selected as the preferred alternative.

2 We are concerned with the approach the document takes to the NEPA process. Differences between the preferred alternative, Alternative A , and Alternative B are little slight, suggesting that a full range of alternatives contemplated by NEPA was not considered. Because of the "abandonment" Federal and non-Federal ownership, Alternatives A or B as written may further reduce this range, depending on development activities. For example, under either alternative, if gas resources are developed to SRA's, operators may concentrate development off Federal

3

per well. The use of four different values estimating long-term disturbance (11.2 acres/well in the RMP; 9.0 acres/well based on an un-described analysis of current conditions; 4.02 acres/well for other projects; and 2.77 acres/well for this project) raises questions and concerns. These differences need to be explained more fully in the final EIS, and their impacts considered here and in the RMP. If 2.77 acres per well is an underestimate, a more accurate value should be used. If not, logical justification for why it is accurate should be provided. The analyses that provided these estimates was difficult to follow. A clear explanation of the methodology used for estimating disturbed acres per well is necessary to understand this important issue and should be included in the final EIS.

4

2.1. The Proposed Action

5 Fifty water wells are proposed but their depth and location remain undetermined. If these wells are tributary to the Platte or Colorado river systems, formal consultation pursuant to the Act will be required to address impacts to listed species.

2.2. Alternative A

6 SRA's should be defined and described fully before their discussion in this section. What resources are being protected? How will the SRA's achieve this protection? What alternative mitigation measures might achieve the same level of protection? Answers to these questions are necessary to develop alternative mitigation measures to apply in SRA's if disturbed area criteria must be waived due to drainage of Federal minerals.

7 A maximum of 14 acres of disturbance, or two wells, per Federal section in SRA's appears arbitrary. The statement "The 14-acre maximum surface disturbance criteria was developed . . . based on public, agency, and resource specialist concerns regarding potential impacts to sensitive resources. . ." does little to explain and document the logic leading to this restriction. Such a restriction is also too vague to offer protection without other limitations, such as minimum well spacing, overall average well density, and levels of development on adjacent State and private lands.

8 Paragraph 2 on page 2-5 appears to conflict with numbers in Table 2.1. From Table 2.1, development of 1 well will produce 7.6 acres of new, short-term disturbance (2.6 acres of pad + approx. 5 acres of road and pipeline). This is consistent with 7.5 acres per well estimated from Table 2.1 (22,400 acres new disturbance / 3,000 new wells). Based on this, the 14-acre criterion is equivalent to development of 2 wells per section. However, the text states operators would be able to develop 1 to 3 wells in addition to 1 for exploratory purposes. This would total 4 wells or 30 acres of new disturbance. We recommend you check for consistency in your calculations and estimates of disturbance or describe the methodology used to reach these conclusions.

9 The statement (page 2-5, paragraph 5) "To accommodate surface disturbance limitation requirements, Operators may limit surface disturbance through . . . selection of alternative locations for ancillary facilities (e.g., outside SRA's or off Federal surface)" appears to treat management of SRA's as only a technicality of work on Federal surface. We recognize

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surface, resulting in an overall disturbance density no different than outside of SRA's. Furthermore, this concentration of development off Federal surface may lead to faster drainage of Federal gas resources, in which case both alternatives require surface disturbance restrictions be waived to protect Federal revenues. The result is these alternatives even more closely resemble the preferred alternative. Review of Table 2.6, Summary of Impacts, largely bears out this conclusion.

2 One way to improve these alternatives would be to include additional mitigation measures in SRA's that are not associated with acres of surface disturbance and are thus independent of problems associated with protecting drainage of Federal minerals. For example, use of above-ground power lines could be restricted in the vicinity of sage grouse leks or nesting habitat to reduce predator perch sites. With a clearer understanding of nature of the SRA's and the resources they are designed to protect, other such mitigation measures could be suggested. The final EIS should be reformulated in this manner to analyze the impacts of a broader range of alternatives.

Specific Comments on the Draft EIS

1.2.4. Land Use Planning

3 We are concerned with the interpretation of guidelines laid out in the Great Divide Resource Management Plan (RMP) as they relate to activities proposed in the draft EIS. The draft EIS acknowledges that the proposed Project will surpass the level of oil and gas development foreseen in the RMP. In response to this, the draft EIS proposes that improved operating procedures will reduce the surface area disturbed per well and maintain the level of disturbance below reasonably foreseeable estimates in the RMP based on total disturbed acres. However, the impacts of a well site or road extend past the direct disturbance of the project footprint. Traffic, noise, and other physical habitat alterations enlarge the area of disturbance past the acreage of surface disturbance. While acreage of surface disturbance is a valid index of environmental impact, it is not the only one. Total number of wells or miles of road or pipeline are other valid indices of environmental impact and should also be considered when assessing overall impacts, regardless of acres of surface disturbance.

In light of this, impact assessment and planning decisions should be revisited prior to exceeding the reasonably foreseeable development estimate from the Great Divide RMP as measured by number of wells developed. This is especially true given new information including the proposal to list the mountain plover (*Charadrius montanus*) as threatened under the Act and new research regarding impacts to sage grouse (*Centrocercus urophasianus*). The RMP should be revisited before the estimated 1,440 well locations are exceeded.

4 Calculations of disturbance in the draft EIS for the Cruzton/Blue Gap, Mulligan Draw, Hay Reservoir, Sierra Madre, Dripping Rock and South Baggs project (other projects) wells suggests that there are only 4.02 acres of long-term disturbance per well (1,200 acres / 298 wells). The Continental Divide/Wamsutter II (CD/WII) project proposes 2.77 acres of long-term disturbance

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9 development on private or State lands cannot be significantly restricted by the BLM. However, where adjacent non-Federal lands within SRA's have developed beyond the designated limit for the SRA, Federal lands development should be restricted to maintain compliance with the intent of this alternative (i.e., maintenance of average 14-acre maximum surface disturbance across the SRA or some part of it). As an alternative, mitigation to protect these sensitive resources may be proposed that is not based on disturbed acres but some other meaningful management tool.

10 The last sentence of the first paragraph on page 2-8 essentially removes all restrictions that differentiate the preferred alternative from alternative A when drainage of Federal minerals is occurring in SRA's. Thus, potentially, alternative A offers no real mitigation to protect surface resources associated with the SRA's where they overlap oil and gas resources. The final EIS should develop some more stringent mitigation requirements to protect SRA resources where they will come in conflict with development of non-Federal surface. Also, a section should be included that explains the logical process and criteria used to determine that drainage is actually occurring.

11 2.3 Alternative B
As this is essentially the same as Alternative A with a 30-acre disturbance limit in SRA's rather than 14 acres, comments on Alternative A apply equally to this section.

2.6.2. Project-wide Development Specifications

12 The final EIS should clarify if removal and stockpiling of topsoil included in estimates of disturbed acreage. If not, it should be included. As construction, maintenance, and operation of the associated road network is likely to have the largest impact on wildlife, all measures to minimize the surface disturbance of road construction will benefit wildlife.

2.6.3. Well Pad Construction

There is no discussion of reserve pit design to protect wildlife. As little as 5 years ago an estimated 2 million migratory birds were lost each year to oil pits throughout the United States. Since then, the oil industry has taken measures to prevent migratory bird deaths in oil pits and mortalities have decreased significantly. Wildlife mortality preventative measures should be an integral part of the proposed action.

13 Birds are attracted to oil pits by mistaking them for natural bodies of water. The sticky nature of oil entraps birds in the pits and they die from exposure and exhaustion. Birds that do manage to escape can die from starvation or the toxic effects of oil ingested during preening. Waterfowl ingesting sub-lethal doses of oil can experience impaired reproductions. Additionally, female aquatic birds returning to their nests with oil on their feathers can inadvertently apply the oil to the eggs. Microliter amounts of oil applied externally to eggs are extremely toxic to bird embryos. Scavengers and predators can also suffer adverse effects from consuming oiled birds.

A study of bird mortality in oil pits in Wyoming conducted by Brent J. Iensell for the University of Wyoming demonstrated that deterrents such as flagging, strobe lights, metal reflectors and

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noise makers were not effective at preventing bird mortalities from occurring in these pits. Esmoil did not find any mortality in pits completely covered with netting or wire mesh.

The analysis should address measures to prevent migratory bird and other wildlife mortality in production pits, emergency spill pits or other open tanks and pits containing oil or fluids
13 produced by the condensation process. While pits containing produced fluids are frequently smaller than reserve pits, they are also attractive and dangerous to wildlife. Oil and produced fluids accumulating in the surface of these pits should be cleaned up immediately or the pit or tank should be enclosed with netting or other means to physically exclude migratory birds and other wildlife. Because of their smaller size, produced fluid pits may be fully enclosed easily for evaporation in "ten horns." We recommend this be the preferred method of handling such waste.

2.6.4.Drilling Operation
14 Sources of water needed for drilling must be identified. If these sources are tributary to the Platte or Colorado river systems, formal consultation pursuant to the Act will be necessary.

2.6.12 Reclamation and Abandonment
15 Caps placed on abandoned wells should be less than 1 meter tall. Tall caps are relatively permanent structures, providing hunting perches for raptors and Corvids not previously present on the landscape.

2.6.13.9. Wildlife and Fisheries
Point 15, regarding mountain plover habitat and surveys, is inaccurate. Current survey protocols are attached for updating this section. Note that the window of opportunity for conducting the necessary surveys is short and will require integration with other project-related planning activities.

16 If mountain plovers are observed in the survey area or known concentration areas are to be developed, we recommend initiation of conference with the Service for project review and assessment as allowed under the Act. We further recommend that language under the last bullet item under Point 15 be changed. Rather than "Where practical, no new surface-disturbing activities would be conducted: . . . within 200 m of identified mountain plover concentration areas . . .," this section should state that the BLM will initiate informal conference with the Service prior to permitting or initiating surface disturbance within 200 m of known concentration areas, regardless of the season. This is prudent because certain projects may permanently alter suitable habitat, qualifying as "take" should the plover be listed and possibly leading to jeopardy to the species.

17 Point 16, regarding black-footed ferret survey requirements needs clarification. While the Operators may be involved in discussions regarding section 7 compliance of the permitting activity, responsibility lies with the BLM to review projects for the necessity of surveys. When a Federal action will lead to disturbance within a prairie dog colony, BLM personnel should consult the Service's Black-footed Ferret Survey Guidelines for Compliance with the

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17 Endangered Species Act. (Ferret Survey Guidelines). This document clearly defines situations where surveys are required in clear ground-disturbing activities for compliance with the Act. Due to some recent confusion among BLM personnel over interpretation of the Ferret Survey Guidelines, we recommend initiation of informal consultation prior to permitting ground-disturbing activities within prairie dog towns or complexes. Point 16 should be changed to reflect this process.

18 To reiterate, Point 18 should be changed to state that no water tributary to the Platte or Colorado river systems will be utilized without first consulting with the Service for effects to downstream listed species pursuant to the Act.

2.7.4.1. Federal Threatened, Endangered, Candidate, and Special Status Species
The status of the mountain plover has changed. In the Federal Register dated February 16, 1999, the U.S. Fish and Wildlife Service gave notice of a proposal to list the mountain plover (*Charadrius montanus*) as a threatened species pursuant to the Act. Regulations at 50 CFR 402.10 allow for conferencing with the Service on any action the Federal agency determines may affect a proposed species, and require conferencing with the Service on any action which is likely to jeopardize the continued existence of any proposed species. On page 7599 of the proposed rule to list the mountain plover (copy attached), the Service has identified some actions that will likely trigger section 7 conferencing.

19

2.7.3.2 Birds
Power poles provide hunting perches for raptors and are consequently avoided by sage grouse. Avoidance is great enough that suitable habitat within ¼-mile of power poles may be unused by sage grouse. This appears to be true whether or not poles are actual perch sites available on these poles. Based on this fact, linear features which provide such elevated perch sites should not be
20 granted exceptions to the 1/4-mile buffer around lek sites as stated in the text. In fact, they should be further restricted to a minimum ½-mile buffer to mitigate impacts to sage grouse. We recommend you contact the Wyoming Game and Fish Department, who has management authority for this species, for management and mitigation recommendations.

4.2.5.1 TES Species, Proposed Action and 4.2.5.5. Mitigation and Monitoring

21 Please note that mountain plover survey guidelines have changed. Current survey protocols are attached for updating this section.

Table 4.14. BLM requirements for inventory, monitoring, and protection of TEC species
22 We commend your efforts at addressing interrelated and interdependent effects of proposed Federal actions by laying out these guidelines for assessing Federal responsibility on adjacent non-Federal surface. However, these guidelines appear to be slightly but significantly in conflict with guidance we have received from the Wyoming State BLM Office. The table states that if access for surveys on non-Federal surface is not granted, operators must pursue access through

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appropriate legal means, and if access is still denied, any analyses will be done using "alternate methods." We assume this refers to remote sensing and related techniques.

However, discussion of this topic in a memo to Field Managers from the Associate State Director of BLM dated February 23, 1999, states, "If the plant and wildlife inventory work can't be accomplished (after pursuing legal means of obtaining access) then the desired activity will have to wait until this information can be gathered." We believe that some information regarding the presence of federally listed species or suitable habitat can only be obtained from on-the-ground surveys, and therefore analyses using "alternate methods" may not be acceptable for assessing project impacts to federally listed species and suitable habitat. In such cases, it will be necessary
22 to assume that the species or suitable habitat is present and plan accordingly or, as the memo directs, wait until this information can be gathered.

This applies equally to development of Federal minerals below private surface and projects not directly related to subsurface estate (e.g., issuance of ROW permits). The memo is instructive in this matter. Where a ROW involves both public and private surfaces, "the BLM may effectively control where the ROW will go through a Plan of Development, even on non-Federal lands." Such control imposes responsibility and therefore requires BLM to obtain and analyze information necessary to avoid or minimize all impacts to federally listed species and suitable habitat affected by the project, whether on Federal or non-Federal surface.

Property identifying the interrelated and interdependent effects of Federal actions and assessing impacts to federally listed species and their habitats on both Federal and non-Federal surface will benefit all parties involved. "Take" of federally listed species is a violation of section 9 of the act regardless of whether it is carried out as part of a Federal, State, or private action. Two means of permitting incidental take exist under the Act: issuance of a biological opinion and incidental take statement pursuant to section 7; and issuance of an incidental take permit associated with an approved Habitat Conservation Plan (HCP) pursuant to section 10 of the Act. Consultation under section 7 is the more expedient means of permitting incidental take. Thus, when actions on private lands may be considered "interrelated and interdependent" to a Federal action, project proponents may be more quickly and easily protected from violating the Act by the incidental take statement of a biological opinion resulting from formal consultation with the Service. This process may only occur when the BLM recognizes its interdependent nature of projects on non-Federal surface during consultation and gathers sufficient information to allow a clear analysis of all project impacts.

General Comments on Appendix D. Wildlife Protection Plan

23 This section outlines a fairly ambitious program of inventory and monitoring. While we commend BLM's efforts to protect wildlife resources in this manner, this program will require significant efforts and costs in data collection, analysis and report writing. There is not clear identification of who will bear the fiscal responsibility for some tasks. For example, the footnote to tables D-2.1 and D-2.2 stating "With Operator assistance, it is anticipated that agency

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obligations would not greatly exceed currently approved personnel or financial commitments." This statement provides no clear commitment on the part of the Operators or the BLM, as the responsible agency. Clarification should be provided on what level of agency obligation is
23 committed in and how BLM will prioritize efforts when available staff and funding are exceeded but not "greatly exceed." We are concerned that limited funding will constrain BLM's ability to ensure these data are collected, analyzed and reported in a timely and high quality manner.

The BLM bears the ultimate responsibility to ensure that wildlife resources are adequately protected from project impacts. We recommend you develop binding agreements with the Operators, as beneficiaries of the proposed project, to ensure data are collected, analyzed, and presented in a manner to allow timely and accurate decisions by promoting these resources. Our office requests to be involved to the extent necessary to ensure data and analyses meet our requirements for supporting effects determinations pursuant to section 7 of the Act.

Specific Comments on Appendix D. Wildlife Protection Plan

Table D-2.2
This table identifies more intensive inventory and monitoring efforts on lands where
24 development will be ≥ 4 locations per section. To make this effort more informative and allow correlations between development and environmental impacts, inventory and monitoring should be undertaken in these areas at least 1 year prior to surface disturbance. This will allow development of the most effective protection measures. The more this approach is viewed as a research project, the more useful the results will be.

D-2.2.2.1. Black-footed Ferret
25 Due to confusion over interpretation of Ferret Survey Guidelines in the past, we request to be involved in discussions of when black-footed ferret surveys should or should not be required until further notice.

D-2.2.2.3. Mountain Plover
This section should be updated to reflect our new survey guidelines. In particular, we recommend the following changes: suitable habitat is defined in the survey guidelines (attached) and this definition should be used when determining areas to survey, rather than the definition in
26 this section, "areas with vegetation less than 6 inches high"; surveys should be conducted as soon to initiation of the project as possible, rather than "within 2 weeks of disturbance"; most important, three surveys will be required, regardless of whether a nest is located during any single survey. Please delete "If no nesting is discovered, no additional surveys would be conducted" as this directly contradicts our survey guidelines. Please make other changes as necessary based on the new survey guidelines.

D-2.2.2.5. Other TEC&SC Species
27 We request to be informed of any observations of federally listed, proposed, or candidate species made during surveys.

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D-2.2.5. Other Inventory and Monitoring Measures

If an understanding of the mechanisms and relationship between high levels of development (e.g., 8 wells per section) is desired, studies will need to include pre-development sampling as well as a stage of disturbance (e.g., 4, 2, and 0 wells per section) for comparison purposes. Such
28 research would be very useful in future management of field development, reducing impacts while expediting future development. However, it will need to be planned in advance of completing the highest level of development and will likely cost more than $10,000 per year (assuming 1:1 match of Operator's $5,000 cap). If this is to be a meaningful mitigation technique, we recommend increasing the Operator's commitment to a minimum of $10,000 and planning and initiating studies based on expected development at least 1 year in advance.

D-2.3.1. Raptors

29 If structures requiring repeated visits will be constructed near active nests, we recommend they be placed at least ¼-mile from the nest, with the exception of ferruginous hawk and federally listed species, where the distance should be 1 mile.

D-2.3.2.1. Black-footed Ferret

30 As already stated, until further notice, we request to be involved in discussions of when black-footed ferret surveys should or should not be required. Please change this section accordingly.

General Comments on the Biological Assessment

We have reviewed the biological assessment (BA) for the Continental Divide/Wamsutter II Natural Gas Project and provide the following comments pursuant to the Endangered Species Act of 1973, as amended.

***Our office was consulted on the Great Divide Resource Area RMP. At that time, we determined that proposals for oil and gas development would have no [ADVERSE?] effect on federally listed, proposed and candidate species based on mitigation measures in the RMP and your commitment to Service review prior to approval of mitigation (Memo to State BLM Director, November 2, 1987). As we understand the process, your agency has extensive discretion over the mineral leasing program. Page 1-9 in the introduction to the draft EIS points out, " In the
31 leasing process, the BLM has considerable authority to avoid and minimize potential environmental impacts by placing restrictive conditions on the lease." If there are restrictions necessary to protect federally listed species, we should have the opportunity to provide input regarding necessary stipulations at this time through informal consultation. To our knowledge, no section 7 consultation was requested prior to offering these leases, contrary to our statement in the RMP consultation. In the future, we recommend that your agency initiate informal consultation with the Service prior to offering mineral leases.

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Specific Comments on the Biological Assessment

E-1.0 Introduction

The definition of critical habitat provided is not accurate. Critical habitat for a threatened or
32 endangered species includes, but is not necessarily limited to "specific locations within the geographical area occupied by the species at the time of listing," rather than "the specific locations . . ." [emphasis added] as stated in this section. Formal designation of "specific locations" requires a lengthy review similar to the listing process. Currently, there is no designated critical habitat for any threatened or endangered species in the Project Area.

Table E-1.1 Threatened, Endangered, Candidate Species

33 The mountain plover is no longer a candidate for listing as stated in this table and accompanying text. It is now proposed for listing as threatened (see attachment).

E-2.1.1. Black-footed Ferret

Because of the complexity of the proposed project, the extensive area of suitable habitat in the Project Area, previous observations of the species in the vicinity of the proposed project, and the extremely tenuous nature of the black-footed ferret in the wild, we cannot concur with your
34 determination of "no effect" without several changes to the project and BA. As proposed, the project could adversely affect the ferret. Initiating section 7 consultation at the time specific ground-disturbing activities in a proposed area is not adequate for section 7 compliance on the present action, since the present action does not foreclose the possibility of future adverse effects on ferrets. Therefore, we recommend the Bureau request initiation of informal consultation to address the impacts of the proposed project on the black-footed ferret.

The words "on a site-specific basis" may be misleading. When surveys are required, the entire
35 town affected by the proposed project should be surveyed, rather than a "site-specific" search of the affected portion. Also, these surveys are required even if some areas within the prairie dog town have a burrow density less than 8/acre.

Searches must be conducted prior to execution of the Federal action. This may be issuance of a
36 permit (e.g., APD, ROW) by the BLM. It may be actual construction activities when the project is to be carried out by the BLM. Under no circumstances should surveys be conducted after issuance of a permit but "prior to construction activity" as stated in the text. We recommend this be changed to "prior to permit issuance or Federal construction activity."

I'm aware that the Ferret Survey Guidelines are being narrowly interpreted and surveys are being
37 conducted where appropriate, the Service should be informed when surface disturbing activities will be permitted or carried out within any prairie dog colonies or complexes. Decisions on the applicability of surveys with respect to the Ferret Survey Guidelines should be thoroughly documented and documentation provided to this office prior to project permitting or initiation.

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The complex nature of surface ownership in the Project Area will produce numerous interrelated and interdependent actions on non-Federal surface. Where a ROW permit will involve both
38 Federal and non-Federal surface, and federally listed, proposed, or candidate species or suitable habitat may be affected by the action, we request to be informed of the Plan of Development, surface resources to be affected, and methods used to document these resources and analyze effects.

E-2.2.6. Mountain Plover

Please note that the mountain plover is no longer a candidate species, but has been proposed for
39 listing as threatened. Mere timing restrictions for construction activities in suitable habitat may not be adequate if the species becomes listed. At that time, habitat loss in itself may adversely affect the species, requiring formal consultation. Survey protocols have changed throughout the document should be updated following the new survey guidelines (attached).

We concur with your determination that the proposed project may adversely affect the mountain plover. While published literature identifies northeastern Colorado and eastern Montana as centers of abundance for the species, there is evidence of considerable populations in Wyoming, though the State is relatively under-studied. Breeding concentrations are known on or near the Project Area (L. Apple, BLM Rawlins Office, pers. comm. July 14, 1999), and more will likely be found as more surveys are conducted. Our field development was cited in the proposed rule (64 FR 7587-7601, attached) as a Federal action that may require conferencing. Aside from the direct effect of ground disturbing activities, little information is available on the effects of activities associated with field development and operation. Should the proposal to list the plover be finalized, the Bureau will need to re-initiate section 7 consultation on this proposed action at that time since the determination has been made that the project may adversely affect the plover. To avoid possible delays in project implementation to allow completion of consultation, we recommend the Bureau request initiation of conference procedures with this office to address the project's effects on mountain plover. Should the plover be listed, the conference report can easily be converted into a biological opinion.

Formal conference resulting in a conference report will provide several benefits to the BLM and
40 the Operators. Operators do not have a clear understanding of how their actions may affect mountain plovers; likewise the Service does not have complete understanding of the gas development process as it relates to the species. Formal conferencing will allow for this necessary exchange. By clearly stating in the conference report what actions may adversely affect the species and how best to avoid or minimize these effects, all parties will have a clear understanding of what actions will not affect the species and what will be required for actions that may affect it. Finally, if the decision is made to list the mountain plover as threatened in February of 2000, the conference report may easily be transformed into a biological opinion with little delay to BLM's permitting process or the development activities. The product would be a single programmatic consultation for many activities associated with development, operation, and reclamation of the proposed Project, greatly expediting section 7 compliance.

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Summary

In closing, we appreciate your efforts to develop mitigation for the impacts of project development and include the Service in the review process. Though we feel that the alternatives should be modified to address our stated concerns, we encourage selection of Alternative A as it is the least damaging alternative to wildlife resources.

We believe that these alternatives would be improved if additional, acreage-independent mitigation measures would be triggered to offset the swirling of surface disturbance limits due to drainage of Federal minerals. Without a clearer understanding of the resources to be protected, we cannot offer specific mitigation measures at this time.

We appreciate your efforts to state clear policy in regards interrelated and interdependent actions on non-Federal surface and identify what information is needed and how it is to be obtained to fully analyze Project impacts. This issue is particularly important where ROW permits are involved as they may affect considerable areas of non-Federal surface. The highly interspersed Federal and non-Federal ownership in the Project Area makes clear policy essential and we look forward to reconciliation of the final EIS with stated BLM policy per our comments.

Appendix D, the Wildlife Protection Plan, will only be as good as allowed by available funding and personnel commitment. We recommend that firm commitments for monitoring and
41 inventory funding and personnel be provided by all parties involved in Project development. In order to define needs and better guide outcomes, specific monitoring proposals should be developed, including objectives and methods.

Due to inconsistencies in application of the Ferret Survey Guidelines across the State recently, we request close coordination when project activities may affect black-footed ferrets or suitable habitat. In addition, we recommend the Bureau initiate informal section 7 consultation with the Service to address impacts of the proposed project on the ferret.

New information is quickly becoming available on the little-studied mountain plover. Its status under the Act may change from proposed threatened to threatened in February of 2000. We recommend survey requirements be changed to reflect new survey guidelines. Because the species is so poorly known, we feel that formal conference on the species and proposed Project effects is necessary and in the interest of the BLM, Operators, and the mountain plover. By producing a programmatic document, we hope to minimize impacts to the species and minimize section 7 workloads in the long term.

Thank you for your assistance in the conservation of federally listed, proposed and candidate species, migratory birds, wetlands, and our other shared trust resources. If you have any questions or comments, please feel free to contact David Petty at the letterhead address or by phone at (307) 772-2374, extension 22..

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Attachments (2)

cc: Director, WGFD, Cheyenne, WY
Nongame Coordinator, WGFD, Lander, WY

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during nesting) will lessen the chance of direct impacts to and mortality of individual mountain plovers in the area, these restrictions do nothing to mitigate indirect effects, including changes in habitat suitability and habitat loss. Surveys are, however, a necessary starting point. The Service has developed the following 2 survey guidelines, depending on whether the intent is to determine the presence or absence of plovers at a site during the nesting season, or to determine the density of nesting plovers.

Survey Protocol

Two types of surveys may be conducted: 1) surveys to determine the presence/absence of breeding plovers (i.e., displaying males and foraging adults), or 2) surveys to determine nest density. The survey type chosen for a project and the extent of the survey area (i.e., beyond the edge of the construction or operational ROW) will depend on the type of project activity being analyzed (e.g., construction, operation) and the users intent. One methodology outlines a breeding survey that was used in northeastern Colorado to establish the density of occupied territories, based on displaying male plovers or foraging adults. The other was developed to only determine whether plovers occupy an area.

Techniques Common to Each Survey Method

- Conduct surveys during early courtship and territorial establishment. Throughout the breeding range, this period extends from approximately mid-April through early July. However, the specific breeding period depends on latitude, elevation, and weather.
- Conduct surveys between local sunrise and 1000 and from 1730 to sunset (periods of horizontal light to facilitate spotting the white breast of the adult plovers).
- Drive transects within the project area to minimize early flushing. Flushing distances for mountain plovers may be within 3 meters for vehicles, but plovers often flush at 50 to 100 meters when approached by humans on foot.
- Use of a 4-wheel drive vehicle is preferable; however, fallow agricultural fields present an access problem. Use of ATVs has proven highly successful in observing and recording displaying males.
- Stay in or close to the vehicle when scanning. Use binoculars to scan and spotting scopes to confirm sightings. Do not use scopes to scan.
- Do not conduct surveys in poor weather (i.e., high wind, precipitation, etc.).

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MOUNTAIN PLOVER SURVEY GUIDELINES
U.S. Fish and Wildlife Service
1999

The mountain plover (*Charadrius montanus*) is a small bird (17.5 cm, 7 in.) about the size of a killdeer (*C. vociferus*). It is light brown above with a lighter colored breast, but lacks the contrasting dark breast-belt common to many other plovers. During the breeding season it has a white forehead and a dark line between the beak and eye, which contrasts with the dark crown.

Mountain plover breeding habitat is known to include short-grass prairie and shrub-steppe landscapes; dryland, cultivated farms; and prairie dog towns. Plovers usually nest on sites where vegetation is sparse or absent, due to disturbance by herbivores, including domestic livestock and prairie dogs. Vegetation at shortgrass prairie sites is less than 4 inches tall, while shrubs visually predominate nest sites within the shrub-steppe landscape. Usually, nest sites within the shrub-steppe are on active prairie dog towns. Nests are commonly located near a manure pile or rock. In addition to disturbance by prairie dogs or livestock, they have also been found on oil drill pads. Mountain plovers are rarely found near water. They may be found on heavily grazed pastures throughout their breeding range and may selectively nest in or near prairie dog towns. Positive indicators for mountain plovers therefore include level terrain, prairie dogs, bare ground, Opuntia pads, cattle, widely spaced plants, and horned larks. It would be unusual to find mountain plovers on sites characterized by irregular or rolling terrain; dense, matted vegetation; grass taller than 4 inches, wet soils, or the presence of killdeer.

These guidelines were developed by Service biologists Pat Deibert, Lou Hanebury, and Bob Leachman, and Dr. Fritz Knopf, USGS-BRD. Keep in mind these are guidelines - please call Bob Leachman at 970-243-2778 if you have any suggestions.

GENERAL GUIDELINES FOR SURVEYS

On February 16, 1999, the Service proposed the mountain plover for federal listing as threatened. Because listing of this species is proposed, the Service may recommend surveys for mountain plovers to better define nesting areas, and minimize potential negative impacts. The Service recommends surveys for mountain plovers in all suitable habitat, as well as avoidance of nesting areas, to minimize impact to plovers in a site planned for development. While the Service believes that plover surveys, avoidance of nesting and brood rearing areas, and timing restrictions (avoidance of important areas

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- Surveys conducted during the courtship period should focus on identifying displaying or calling males, which would signify breeding territories.
- For all breeding birds observed, conduct additional surveys immediately prior to construction activities to search for active nest sites.
- If an active nest is located, an appropriate buffer area should be established to prevent direct loss of the nest or indirect impacts from human-related disturbance. The appropriate buffer distance will vary, depending on topography, type of activity proposed, and duration of disturbance. For disturbances including pedestrian foot traffic and continual equipment operations, a 200-meter buffer is recommended.

SURVEY TO DETERMINE PRESENCE/ABSENCE

1. Conduct the survey between May 1 and June 15, throughout the breeding range.
2. Visual observation of the area should be made within 200 m of the proposed action to detect the presence of plovers. All plovers located should be observed long enough to determine if a nest is present. These observations should be made from within a stationary vehicle, as plovers do not appear to be wary of vehicles.
3. If no visual observations are made from vehicles, the area should be surveyed on ATV's. Extreme care should be exercised in locating plovers due to their highly secretive and quiet nature. Surveys by foot are not recommended because plovers tend to flush at greater distances when approached using this method. Finding nests during foot surveys is more difficult because of the greater flushing distance.
4. A site must be surveyed 3 times during the survey window, with each survey separated by at least 14 days.
5. Initiation of the project should occur as near to completion of the survey as possible. For example, seismic exploration should begin with 2 days of survey completion. A 14 day period may be appropriate for other projects.
6. If an active nest is found in the survey area, the planned activity should be delayed 37 days, or one week post-hatching. If a brood of flightless chicks is observed, activities should be delayed at least seven days.

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SURVEY TO DETERMINE DENSITY OF NESTING MOUNTAIN PLOVERS

We are assuming people will have received training on point counts in general before using this specialized point count technique adapted to mountain plovers.

Establishing Transects

1. Identify appropriate habitat and habitat of interest within geographic areas of interest.
2. Upon arriving in appropriate habitat, drive to a previously determined random starting point.
3. For subsequent points, drive a previously determined random distance of 0.3, 0.4 or 0.5 miles.
4. Each transect of point counts should contain a minimum of 20 points.

Conducting The Point Counts

1. Conduct counts between last week in June to July 4th at eastern plains elevation in Colorado.
2. Only 1 counter is used. Do not use a counter and recorder or other combinations of field help. Drivers are okay as long as they don't help spot plovers.
3. If an adult mountain plover is observed, plot occupied territories on a minimum of 1:24,000 scale map and on a ROW diagram or site grid (see attached). The ROW diagram will be at a greater level of detail, depicting the location of breeding birds (and possible nest sites) relative to ROW centerline, construction boundary, and applicable access roads.
4. Estimate or measure distances (in meters) to all mountain plovers. Method used should be noted, e.g., estimates w/distance training, estimates w/o distance training, rangefinder or measured with tape measure, etc.
5. Record "fly-overs" as "FO" in the distance column of the data sheet.
6. If you disturb a mountain plover while approaching the point, estimate the distance from point-center to the spot from which the bird was flushed.

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7. Conduct counts for 5 minutes with a 3 minute subsample to standardize with BBS.
8. Stay close to your vehicle while scanning.

Recording Data

Record the following information AT EVERY POINT, EVERY DAY.

- start time
- unique point code (don't duplicate within a field crew or across dates)
- number of mountain plovers and distance to each
- land use and/or habitat type (e.g., fallow wheat, plowed, shortgrass)
- temperature, Beaufort wind, and sky conditions (clear, partly cloudy, overcast)
- information on the data sheet somewhere.
- your name and address
- date
- Record for each point at some point during the census.
- detailed location description of each point count including road number, distance to important intersections.
- record transect and point locations on USGS county maps.
- Universal Transverse Mercator from maps or GPS are useful.

GENERAL HABITAT INDICATORS

Positive habitat images

Stock tank (non-leaking, leaking tanks often attract killdeer)

Flat (level or "tilted) terrain

Burned field/prairie/pasture

Bare ground (minimum of 30 percent)

"Spaced" grass plants

Prairie dog colonies

Horned larks

Cattle

Heavily grazed pastures

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Opuntia pads visible

Negative habitat images

Killdeer present (indicating less than optimal habitat)

Hillsides or steep slope

Prominent, obvious low ridge

Leaky stock tanks

Vegetation greater than 4 inches in height

Increasing presence of tall shrubs

Matted grass (i.e., minimal bare ground)

Lark buntings

List of Subjects in 47 CFR Part 73

Radio Broadcasting.

Federal Communications Commission.
Magalie Roman Salas,
Secretary.
[FR Doc. 99-3569 Filed 2-12-99; 8:45 am]
BILLING CODE 6712-01-P

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

RIN 1018-AF35

Endangered and Threatened Wildlife and Plants: Proposed Threatened Status for the Mountain Plover

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule.

SUMMARY: The Fish and Wildlife Service (Service) proposes to list the mountain plover (*Charadrius montanus*) as a threatened species pursuant to the Endangered Species Act (Act) of 1973. The mountain plover is a bird of shortgrass prairie and shrub-steppe landscapes at both breeding and wintering locales. Breeding occurs in the Rocky Mountain States from Canada south to Mexico with most breeding birds occurring in Montana and Colorado. Most wintering birds occur on grasslands or similar landscapes in California; fewer wintering birds occur in Arizona, Texas, and Mexico. Breeding Bird Survey trends analyzed for the period 1966 through 1996 document a continuous decline of 2.7 percent annually for this species, the highest of all endemic grassland species. Between 1966 and 1991, the continental population of the mountain plover declined an estimated 63 percent. The current total population is estimated to be between 8,000 and 10,000 individuals. Conversion of grassland habitat, agricultural practices, management of domestic livestock, and decline of native herbivores are factors that likely have contributed to the mountain plover's decline. Pesticides may be a factor contributing to the decline of mountain plovers, but their effects are not completely understood.

DATES: We must receive comments from all interested parties by April 19, 1999. We must receive requests for public hearings by April 2, 1999.

ADDRESSES: Send comments and materials concerning this proposal to the Assistant Field Supervisor, U.S. Fish and Wildlife Service, 764 Horizon Drive, South Annex A, Grand Junction, Colorado 81506-3946. We will make comments and materials we receive available for public inspection, by appointment, during normal business hours at the above address.

FOR FURTHER INFORMATION CONTACT: Robert Leachman at the above address, telephone 970/243-2778; facsimile 970/245-6933.

SUPPLEMENTARY INFORMATION:

Background

The mountain plover (*Charadrius montanus*) was described by John K. Townsend in 1837 from specimens collected near the Sweetwater River, Fremont County, Wyoming (Coues 1874, cited in Laun 1957). This species was originally named the Rocky Mountain plover because the first specimens were taken within sight of those mountains (Oberholser 1974). The mountain plover has since been known by several different scientific names, as well as other common names. The species name *Charadrius montanus* was formally adopted by the Committee on Classification and Nomenclature of the American Ornithological Union in 1983 (R. Banks, National Biological Service, pers. comm., 1994). There are no subspecies (Oberholser 1974).

The mountain plover is a small bird (about 17.5 centimeters (cm)) (7 inches)(in)), about the size of a killdeer (*Charadrius vociferus*). It is light brown above with a lighter colored breast, but lacks the contrasting dark breastbelt common to many other plovers. During the breeding season it has a white forehead and a dark line between the beak and eye, which contrasts with the dark crown. Mountain plovers are insectivorous, with beetles, grasshoppers, crickets, and ants their principal food items (Stoner 1941, Baldwin 1971, and Rosenberg et al. 1991, Knopf 1998).

The mountain plover is associated with shortgrass and shrub-steppe landscapes throughout its breeding and wintering range. Historically, on the breeding range, it occurred on nearly denuded prairie dog towns (Knowles et al. 1982, Olson-Edge and Edge 1987) and in areas of major bison concentrations (Knopf 1997). Many consider nesting mountain plovers to be strongly associated with prairie dog towns (Tyler 1968, Knowles et al. 1982, Knowles and Knowles 1984, Shackford 1991, Samson and Knopf 1994, Knopf 1996b). All of the endemic grassland birds evolved within a grassland mosaic of lightly, moderately, and heavily grazed areas, and mountain plovers are considered to be strongly associated with sites of heaviest grazing pressure, to the point of excessive surface disturbance (Knopf and Miller 1994, Knopf 1996b). Currently, the mountain plover is also attracted to man-made landscapes (e.g., sod farms, cultivated fields) that mimic the natural habitat associations, or sites with grassland characteristics (alkali flats, other agricultural lands).

Nesting mountain plovers are reported in some of the Rocky Mountain and Great Plains States from Canada south to Texas, and possibly in Mexico. Most mountain plovers breed in Colorado and Montana; breeding also occurs in Wyoming, New Mexico, Arizona, Nebraska, Utah, Kansas, Oklahoma, and Texas. Breeding is suspected in Mexico and historic nesting records occur from Canada. Nesting habitat in Canada is restricted to southeastern Alberta and southwestern Saskatchewan. Breeding adults, nests, and chicks have been observed on cultivated lands in Colorado, Kansas, Nebraska, Oklahoma, and Wyoming. Most mountain plovers winter in California where they are found on grasslands or landscapes resembling grasslands, and cultivated fields; many fewer wintering plovers are reported from Arizona, Texas, and Mexico.

The mountain plover is one of nine bird species endemic to the North American grasslands (Knopf 1996a). Endemic grassland birds have declined more rapidly than other species in North America, and the mountain plover's decline is greater than that of the other grassland endemics (Knopf 1994; Sauer et al. 1997). Unlike other plovers, mountain plovers are rarely found near water.

Habitat Characteristics

Mountain plovers evolved on grasslands that were inhabited by large numbers of nomadic grazing ungulates such as bison (*Bison bison*), elk (*Cervus elaphus*), pronghorn (*Antilocapra americana*), and burrowing mammals such as kangaroo rats (*Dipodomys* sp.), prairie dogs (*Cynomys* sp.), and badgers (*Taxidea taxus*) (Knopf 1996a). The herbivores dominated the grassland landscape at both breeding and wintering sites, and their grazing, wallowing, and burrowing activities created and maintained a mosaic of vegetation and bare ground to which mountain plovers became adapted (Dobkin 1994, Knopf 1996a).

Short vegetation, bare ground, and a flat topography are now recognized as habitat-defining characteristics at both breeding and wintering locales (Graul 1975, Knopf and Miller 1994, Knopf and Rupert 1995). Mountain plover

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sites are dominated by short vegetation and bare ground, often with manure piles or rocks nearby. Mountain plovers historically nested on black-tailed prairie dog (*Cynomys ludovicianus*) towns (Flowers 1985, Godbey 1992, Kantrud and Kologiski 1982, Knowles et al. 1982, Knowles and Knowles 1993) or other areas heavily grazed by prairie herbivores.

Currently, in addition to nesting on prairie dog towns, mountain plovers show a strong affiliation for sites that are heavily grazed by domestic livestock (e.g. near stock watering tanks), and also attempt breeding on fallow and cultivated fields which mimic natural habitats (Knopf 1996b). In California, many of the preferred wintering sites are grazed by domestic livestock, or are within giant kangaroo rat (*Dipodomys ingens*) precincts or California ground squirrel (*Spermophilus beecheyi*) colonies (Knopf and Rupert 1995). Wintering mountain plovers in Mexico are almost entirely associated with prairie dog towns (N. Kaufman, U.S. Fish and Wildlife Service, *in litt.*, 1998). Since mountain plovers are usually associated with sites that are modified by grazing and digging mammals, Knopf and Miller (1994) suggested classifying the mountain plover as a species more closely associated with disturbed prairie sites, rather than pristine prairie landscapes.

Bison and elk are now functionally extirpated from all mountain plover breeding habitat, and numbers of pronghorn are greatly reduced. Similarly, prairie dog and/or kangaroo rat numbers are greatly reduced on mountain plover breeding and wintering sites. Now, the primary grazer on both breeding and wintering habitat is domestic livestock, although prairie dogs and/or giant kangaroo rats influence habitat locally at a few sites. Current domestic livestock grazing management emphasizes rotating the animals in time and space among allotments within fenced pastures (Dobkin 1994, Knopf 1996c). Currently accepted domestic livestock grazing management may cause grasses to become more dense and uniform in height, decrease the amount of bare ground, increase the abundance of shrubs, and reduce the frequency and effects of fire (Knopf and Rupert *in press*, Dobkin 1994). Therefore, some types of domestic livestock grazing management techniques do not result in the same habitat characteristics as those created by the native herbivores, with which the mountain plover evolved.

Life History

Mountain plovers arrive on their breeding grounds by late March. The nest is a simple scrape on the ground which is lined with organic debris (Graul 1975). Nests typically occur in areas with vegetation less than 10 cm (4 in) in height, with at least 30 percent bare ground, and with a conspicuous object such as a manure pile, clump of forbs, or rock nearby (Graul 1975, Knopf and Miller 1994, Olson and Edge 1985, Knowles and Knowles 1998). Although short vegetation, bare ground, and an object are characteristic of nest sites, the presence of some taller vegetation to shade chicks and adults also has been reported as necessary (Shackford and Leslie 1995a). Nest sites occur on ground with less than 5 percent slope, which is usually heavily grazed by domestic livestock and/or prairie dogs (Graul 1973, Kantrud and Kologiski 1982, Knowles and Knowles 1998). Vegetation at nest sites throughout the breeding range is variable, but usually dominated by needle-and-thread (*Stipa comata*), blue gramma (*Bouteloua gracilis*), buffalo grass (*Buchloe dactyloides*), plains prickly pear cactus (*Opuntia polycantha*), June grass (*Koeleria cristata*), and sagebrush (*Artemisia* sp.) (Graul 1975, Parrish 1988, Day 1994, Knowles and Knowles 1998).

On the Colorado breeding grounds, flocks of mountain plovers begin to form as early as mid-June prior to migration to wintering habitat. The flocks increase in size until mid-August, and then depart for the wintering grounds between August and October (Graul 1975). Mountain plovers begin to arrive on wintering grounds in California by September, but do not appear in large numbers until November (Jurek 1973; Knopf and Rupert 1995). Two mountain plovers that were color banded in Colorado in 1992 were seen in the San Joaquin Valley of California the same year, representing the first direct link between breeding and wintering habitat for the species (Knopf and Rupert 1995). A mountain plover banded as a chick in Phillips County, Montana, in 1995, was seen in the Sulphur Springs Valley of Arizona on January 1, 1998, supporting other indications that the fall migration to wintering habitat is less direct than migration to breeding grounds (F. Knopf, USGS-Biological Resources Division, pers. comm. 1998, Knopf and Rupert 1995).

Historically, the mountain plover has been reported from a variety of habitats during the wintering period, including grasslands and agricultural fields in California (Tyler 1916; Grinnell et al. 1918; Belding 1879 *in* Grinnell et al. 1918; Preston 1981 *in* Moore et al. 1990; Werschkull et al. 1984 *in* Moore et al. 1990). More recently, mountain plovers are reported from natural, noncultivated sites such as alkali sink scrub, valley sink scrub, alkali playa, and annual grasslands (S. Fitton, Bureau of Land Management (BLM), *in litt.*, 1992, Knopf and Rupert 1995) in the Central Valley. Although cultivated land is used by wintering mountain plovers and is more abundant than noncultivated land, Knopf and Rupert (1995) found that mountain plovers preferred alkali flats, burned grasslands, and grazed annual grasslands to cultivated sites. Grazing on such grassland sites was usually by domestic livestock or burrowing mammals (Knopf and Rupert 1995).

Mountain plovers are gregarious on their wintering habitat. Flock size averages from about 20 to 180 individuals, increasing in size as spring migration approaches (Knopf and Rupert 1995). Flocks with up to 1,100 individuals have been reported from the San Joaquin Valley and Imperial Valley (B. Radke, Service, *in litt.* 1992, Knopf and Rupert 1995). Mountain plovers begin leaving wintering areas by mid-March and may make a nonstop migration to breeding grounds (Knopf and Rupert 1995). In general, mountain plovers spend about 4 months on breeding grounds, 5 months on wintering habitat, and the remaining time mostly in their fall migration (Knopf and Rupert 1996).

Breeding Distribution and Abundance

As discussed by Knopf (1996), the continental breeding range of the mountain plover has been reduced from its historical extent, especially in the eastern portion of the range. The mountain plover was formerly common in western and central Kansas (Goss 1891), and reported as numerous between Fort Supply, Oklahoma and Dodge City, Kansas (McCauley 1877). The species is considered to have been historically numerous in Colorado (Bailey and Niedrach 1965) and Wyoming (Knight 1902). Mountain plovers formerly occupied western South Dakota (South Dakota Ornithologist's Union 1991) and Nebraska (Knopf 1996), and there is one known breeding reference in North Dakota (Roosevelt 1885). They may have bred in northern Mexico in 1901 (Sanford et al. 1924).

Colorado

Mountain plovers have been studied more intensively in Weld County than any other location throughout their range. Graul and Webster (1976)

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considered Weld County the breeding stronghold for the mountain plover. A conclusion widely referenced by subsequent authors (e.g., Knopf and Rupert 1996). Inventories completed by the Colorado Bird Atlas Partnership from 1987 through 1995 reported mountain plovers from 8 percent of the survey blocks inventoried in eastern Colorado, and the number of mountain plover sightings in some survey blocks was nearly equal to or greater than those reported from Weld County (H. Kingery, Colorado Bird Atlas Partnership, pers. comm., 1994, *In litt.*, 1998). Kingery (*In litt.*, 1997) estimated that about 7,000 mountain plovers breed in Colorado, and that about 1,500 of those breed in Weld County.

Shackford and Leslie (1995b) reported mountain plovers seen on cultivated fields in 14 counties in eastern Colorado from 1992 through 1995, with most birds seen in Kiowa County. Adult mountain plovers also occur on cultivated fields in Las Animas County within the boundary of the Comanche National Grassland in southeast Colorado (R. Cline, U.S. Forest Service, *In litt.*, 1994). Breeding mountain plovers also have been reported from southeast Colorado by other researchers (Chase and Loeffler 1976; Nelson 1993; R. Bunch, no affiliation, *In litt.*, 1994). Carter et al. (1998) detected mountain plovers at very low densities in 10 Colorado Counties; mountain plovers were most numerous in Kiowa and Park Counties. The Colorado Natural Heritage Program conducted mountain plover surveys in Park County in 1994, 1995, and 1997 (Rupert and Pague 1994; Sherman et al. 1996; Hanson 1997). About 1,000 mountain plovers were estimated in Park County in 1995, and these surveys also disclosed the vulnerability of some breeding sites to ongoing and potential urbanization (Sherman et al. 1996). Additionally, private biologists have observed adults in Moffat County in July (R. Leschnen, Service, pers. comm., 1994).

The Bird Atlas Partnership survey (H. Kingery, *In litt.*, 1998) and other inventory of cultivated fields (Shackford and Leslie 1995b) mentioned above resulted in observations of breeding behavior and relative abundance, not estimates of density or productivity. Knopf (1998) reported densities of breeding birds on the Pawnee National Grassland (Weld County) as ranging between 2.0 and 4.7 birds/square kilometer (km) between 1990 and 1994. In 1995, the Pawnee National Grassland experienced exceptionally wet, cold weather through June and few birds were found there during the breeding season (Knopf 1998). Sherman et al. (1996) estimated 1.32 birds/square km in Park County in 1993.

Estimates of nest success and productivity in Colorado are available from studies on prairie habitat in Weld County and cultivated lands in southeast Colorado. Nest success on the Pawnee National Grassland in Weld County was highly variable between years. Percentage of nests where at least one egg hatched ranged from 23 percent (Knopf and Rupert 1996) to 85 percent (Grau 1975). Mountain plovers in Weld County fledged an estimated 1.4 young per nesting pair in 1968–1974 (Grau 1975) and also in 1982, suggesting that breeding success in Weld County did not change much in nearly 30 years (Miller and Knopf 1983). McCaffery et al. (1984) estimated a brood size of about 1.3 chicks/adult in Weld County just prior to fledging. Knopf (1996) hypothesized that reported low fledging rates were attributable to drought, which affects the food supply and simultaneously increases predation pressures. The only other estimate of productivity in Colorado is from mountain plovers on cultivated fields in southeast Colorado, southwest Kansas, and northwest Oklahoma where Shackford and Leslie (1995b) estimated 28 percent of nests were successful and 47 percent of chicks that hatched fledged. By comparison, on the Pawnee National Grassland, an estimated 50 percent of nests were successful and 47 percent of chicks that hatched also fledged (Miller and Knopf 1983). Further studies are needed to determine if average productivity and recruitment on cultivated land differ significantly from native grassland. In Weld County 60 to 70 percent of the mountain plover habitat occurs on the Pawnee National Grassland (F. Knopf, *In litt.* 1991). We therefore believe that areas within Weld County will be important to any future conservation efforts because mountain plovers have shown an affinity for this locale. Independent studies over a 30 year period have documented successful reproduction, and the extensive Federal ownership may ensure continuation for habitat maintenance and protection.

Recent reports of the mountain plover from many widely distributed areas in Colorado than previously known has led to some speculation that the population in Colorado is stable or improving. Pulliam (1988) expressed caution that basing a species' conservation needs on where it is most common rather than where it is most productive may lead to errors. Although additional sightings of mountain plovers in Colorado are encouraging, some of these sightings have occurred on cultivated lands. We know of no productivity estimates that are available to compare production on these cultivated lands with production estimated from historic breeding sites.

Montana

Breeding habitat for mountain plovers in Montana is usually characterized by grasslands and shrublands containing community of needle-and-thread, blue grama, June grass, sandreed (*Atriplex gardneri*), and prickly pear cactus. Most breeding sites are grazed by domestic livestock or prairie dogs, and the largest number of breeding mountain plovers in Montana is found on a large complex of black-tailed prairie dog towns in Phillips and Blaine Counties (Knowles and Knowles 1998). The prairie dog towns occur on the Charles M. Russell National Wildlife Refuge, Fort Belknap Indian Reservation, BLM, State school lands, and private lands. Mountain plovers in these two Counties number fewer than 2,000 individuals, and are considered the second major breeding population for the species (Knopf and Miller 1994, Knowles and Knowles 1998, S. Dinsmore, Service, pers. comm., 1998).

Mountain plovers also breed on land administered by the BLM in Valley County (Little Beaver Creek), and on private land in Wheatland and Golden Valley Counties near the Judith Basin and Big Snowy Mountains (Knowles and Knowles 1998). Between 1991 and 1997 now also confirm breeding mountain plovers in Big Horn, Broadwater, Carbon, Carter, Fergus, Jefferson, Hill, Madison, Musselshell, Petroleum, Stanford, Treasure, Wheatland, Teton Counties (Knowles and Knowles 1996, 1998; J. Grensten, BLM, pers. comm., 1998).

Only one mountain plover was located during a survey of cultivated fields in 17 counties in Montana in 1995, and mountain plovers appear to use cultivated fields only for foraging and territorial display; nesting has not been observed in cultivated fields in Montana (C. Knowles, U.S. Fish and Wildlife Service, pers. comm., 1998). Shackford and Leslie (1995b) reported that most crops frequent disturbance of fields, e shorter growing season, and more clayey soils in Montana compared with Colorado (Knowles pers. comm., 1998) may explain the fact that fewer birds are sighted nesting on cultivated fields.

With the exception of the population in Phillips and Blaine Counties, mountain plovers total less than 800 individuals at the other 5 locations. Therefore, Knowles and Knowles (1998) estimate fewer than 2,800 mountain plovers in Montana. Selected prairie-dog towns at the Charles M. Russell National Wildlife Refuge in Montana yielded density estimates of 6.8 and 5.8 birds/square km in 1990 and 1992, respectively. The spring of 1995 was very wet in Montana, and densities in this area were reported at 1.3 birds/square km in that year (Knopf 1996).

Wyoming

The mountain plover is classified as common in Wyoming, with breeding known or suspected in 20 of 28 blocks of latitude/longitude. Six blocks in the southeast corner of the State make up the primary breeding range (Oakleaf et al. 1992). From 1952 to 1987, nesting was confirmed on the Thunder Basin National Grassland in northeast Wyoming with nearly all nests found on black-tailed prairie dog towns (Barostak 1982; M. Edwards, Forest Service, *In litt.*, 1994; T. Byer, Forest Service, *In litt.*, 1997). Based on 1987 survey data, about 150 mountain plovers occur on the Grassland (T. Byer, *In litt.*, 1997). Recently, Thunder Basin National Grassland acquired an adjacent parcel of privately-owned rangeland, which together with existing property forms a management unit that has been identified as the most essential site for black-footed ferret reintroduction. In addition, the current Forest Management Plan for Thunder Basin is being revised and the new plan will identify recommended ways to manage specifically for prairie wildlife, such as prairie dogs and mountain plovers (M. Lockhart, U.S. Fish and Wildlife Service, pers. comm., 1998).

From 1979 to 1992, nesting was confirmed at the Antelope Coal Mine in the southern Powder River Basin. Reported breeding densities of 0.9 to 2.4 birds/square km are the highest ever reported for Wyoming prior to 1995 and at other breeding sites in Montana and Colorado (Oakleaf 1985, Parrish 1988, M. Edwards, *In litt.*, 1994). Mountain plovers throughout the southern Powder River Basin are generally thought to be widely scattered at low densities, with a few areas of local concentration (Oakleaf 1989). Knopf (*In litt.*, 1991) found mountain plovers on the Laramie Plains, on the Chugwater Flats north of Cody, and in the vicinity of Shirley Basin. One nest and some adults were located on cultivated lands in Laramie County (Shackford and Leslie 1995b). Mountain plovers also breed in shrub-steppe habitat in southwest Wyoming (Oakleaf et al. 1992). Recent survey efforts in Wyoming have not been as intensive as those in Montana or Colorado. In 1991, Knopf (*In litt.*, 1991) estimated fewer than 1,500 mountain plovers nesting in Wyoming.

New Mexico

Historic reports from New Mexico indicate that mountain plovers numbered from several individuals (1968 to 1977 data) to 150 in a single flock in July 1937 (Hubbard 1978). Sager (1985) conducted mountain plover surveys in 1995 and found 152 breeding adults and 28 juveniles at 35 sites in 11 counties north of 34 degrees latitude. His search was primarily confined to areas north of 34 degrees latitude. However, one adult was located in Hidalgo County during 4 days of survey effort south of 34 degrees, suggesting that occasional breeding may occur in the southern parts of the State (Sager 1998). Migrating mountain plovers were also sighted in Valencia, Colfax, Union, and Torrance Counties, with most of these seen on turf farms at Moriarty and Los Lunas (Sager 1998). The recent surveys in New Mexico imply that additional searching may yield more mountain plovers (S. Williams III, New Mexico Department of Game and Fish, *In litt.*, 1997).

Oklahoma

Few breeding mountain plovers were found in Oklahoma native shortgrass prairie and prairie dog towns in 1986. The few plovers found, associated with the discovery of one mountain plover nest on a mixed field, stimulated additional surveys of cultivated fields in Oklahoma (Shackford 1991). In Cimarron County in the panhandle of Oklahoma, Shackford (1991) found that during the nesting seasons of 1986–1990, 60 percent of mountain plovers observed were in native grassland and 40 percent were in cultivated fields. Of the 15 birds observed in native grasslands, one was on prairie dog towns. Annual counts of mountain plovers on cultivated fields from 1990 through 1995 have ranged from 3 to 428 (Shackford and Leslie 1995b).

Other Breeding Areas

In Utah, the only site known to have breeding mountain plovers is the Duchesne County, south of Myton, in the Uintah Basin. Counts of breeding mountain plovers in this area from 1992 through 1997 have ranged from 7 to 29, and broods have been found in each year except 1992 (T. Dabbs, BLM, *In litt.*, 1997). Counts of breeding mountain plovers on cultivated lands in western Kansas from 1992 through 1995 have ranged from 52 (8 counties searched) to 114 (4 counties searched) (Shackford and Leslie 1995b). Surveys of cultivated fields and rangelands within the boundary of the Cimarron National Grassland in Kansas also have been conducted. Counts on the Grassland in 1994, 1996, and 1997 ranged from 1 to 13, and most of the sightings were on plowed fields (J. Chynoweth, Forest Service, *In litt.*, 1997).

Three pairs of mountain plovers were reported near Fort Davis, Texas, in 1892 (K. Brian, Davis Mountain State Park, pers. comm., 1992), but more recent breeding in Texas cannot be confirmed due to lack of permission to access private land (Hornor, Texas Parks and Wildlife Department, *In litt.*, 1997). An adult incubating three eggs was found near Springerville, Apache County, Arizona, in May 1996 (T. Corderv, U.S. Fish and Wildlife Service, pers. comm., 1998). A nesting mountain plover was found in western Nebraska in 1990 (C. Knopf, *In litt.*, 1990), and two mountain plover nests were found in a fallow field in the same vicinity in 1997 (W. Johnan, Service, *In litt.*, 1997). Seventeen mountain plovers were counted on 10 cultivated fields in western Nebraska in 1992 and 1995 (Shackford and Leslie 1995b). The most recent nesting record in Canada is one found in southwestern Alberta in 1990 (C. Wershler, Sweetgrass Consultants Limited, pers. comm., 1992). Mountain plover breeding behavior was observed in 1998 in Nueveo Leon, Mexico, but additional surveys are needed to confirm nests and broods (F. Knopf, *In litt.*, 1998). The Service is not aware of any breeding records from other locations.

Winter Distribution

Historically, mountain plovers have been observed during the winter in California, Arizona, Texas, and Nevada; the California coastal islands of San Clemente Island, Santa Rosa Island; and the Channel Islands (Strecker 1912, Swarth 1914; Acorn 1948; Junek 1973 Jorgensen and Ferguson 1984; Garret and Dunn 1981; R. Desaki, American Birds Editor, *In litt.*, 1992). In Mexico, wintering mountain plovers have been sighted in Baja, California, as well as north-central and northeastern Mexico specifically in Chihuahua, Coahuila, Sonora, Nueve Leon, and San Luis Potosi (Russell and Lamm 1978; A. Martinez Leon, The Bird Center, *In litt.* 1990; L. Stenzel, Point Reyes Bird Observatory, *In litt.*, 1992; R. Beedie, pers. comm., 1998). Currently, the majority of mountain plovers appear to winter in California, with fewer reported from Texas, Arizona, and Mexico.

The only published scientific study mountain plovers on their wintering habitat documented movement patter habitat preferences, and winter survivrates in the San Joaquin Valley and

Carrizo Plain Natural Area of California (Knopf and Rupert 1995). Due to the lack of published information on wintering birds, we examined Christmas Bird Count data, notes of California sightings compiled from American Birds, National Wildlife Refuge records, BLM surveys, and other information (J. Lowe, Cornell Laboratory of Ornithology, *in litt.*, 1989; B. Daniel, *in litt.*, 1992).

California

In California, mountain plovers are most frequently reported and found in the greatest numbers in two general locations—(1) in the Central Valley south of Sacramento and west of U.S. Highway 99, and (2) the Imperial Valley in southern California. Throughout these areas, sightings occur on agricultural fields and noncultivated sites; noncultivated sites are preferred habitat (Knopf and Rupert 1995). Within the Central Valley, flocks of up to 1,100 birds have been seen recently in Tulare County (Knopf and Rupert 1995). The Carrizo Plain Natural Area in San Luis Obispo County also is recognized as an important wintering site, with wintering birds reliably reported from the west side of the Carrizo Plain Natural Area since 1971 (S. Fitton, *in litt.*, 1992). The Sacramento Valley and the rest of Central Valley also provides wintering habitat for flocks of mountain plovers within Solano and Yolo Counties. During the 1998 census, 230 and 187 mountain plovers were observed within each of these counties, respectively (K. Hunting, California Department of Fish and Game, *in litt.*, 1998).

About 2,000 mountain plovers were counted on agricultural fields in the Imperial Valley in 1994 (B. Barnes, National Audubon Society, *in litt.*, 1994). At other locations in southern California, birds have been seen at Harper Dry Lake, Antelope Valley, San Jacinto Lake Wildlife Area, and the Tijuana River Valley (K. Garrett, no affiliation, pers. comm., 1985; C. Cardiff, no affiliation, pers. comm., 1992; T. Paulek, California Department of Fish and Game, comm., 1992; E. Copper, unaffiliated, *in litt.*, 1992). Mountain plovers are considered extirpated (extinct) from Orange County (B. Harper, U.S. Fish and Wildlife Service, *in litt.*, 1990).

Arizona, Texas, Nevada and Mexico

Wintering mountain plovers also are reported from other areas, but in much lower numbers than are reported from California. From 1983 to 1991, a total of 30 to 180 mountain plovers were reported from southeastern Arizona (J. Witzeman, Audubon Society, pers. comm., 1992). In Texas, up to 130 mountain plovers were counted from Guadalupe, San Patricio, and Williamson Counties (G. Lasley, Regional Editor American Birds, pers. comm., 1992). Mountain plovers also have been sighted throughout the year in Texas in Val Verde, Uvalde, Kleburg, Aransas, Tom Green, Concho, and Schleicher Counties (P. Harner, *in litt.*, 1997), and at Laguna Atascosa National Wildlife Refuge (L. Lasch, U.S. Fish and Wildlife Service, *in litt.*, 1992). In Nevada, several mountain plovers were collected in the Lahontan Valley in 1940, with a few observed there in the 1970's (Alcorn 1978; F. Kincaid, pers. comm., 1993). In January 1992, 148 mountain plovers were counted at the north end of Laguna Figueroa, Baja California, Mexico (L. Sievert, *in litt.* 1992). About 150 mountain plovers were seen on a prairie dog town in San Luis Potosi, Mexico, in January 1998 (R. Estelle, pers. comm., 1998).

Total Mountain Plover Population Abundance and Trend Estimates

Historically, breeding mountain plovers were reported as locally rare to abundant, and widely distributed in the Great Plains region from Canada south to Texas (Coues 1878, Knight 1902, McCaffrey 1926, Maxey and Meldrech 1985). On wintering grounds in California, as many as 10,000 mountain plovers were reportedly counted in the San Joaquin Valley during the 1960's (J. Engler, U.S. Fish and Wildlife Service, *in litt.*, 1992). In January 1994, 3,346 mountain plovers were counted during a published survey of 17 sites throughout California (B. Barnes, *in litt.*, 1994). A similar survey effort in California in January 1998 counted 2,179 (Hunting, *in litt.*, 1998).

We present the above estimates of mountain plover relative density and abundance reports and within each state to give the reader an indication of the variability in information reported in published literature and other references. The estimates of abundance provided for each State are usually from different researchers, from different times, and using different techniques. Therefore, the estimates should not be considered comparable to one another, nor necessarily reliable. Knopf (1996b) estimated the total 1995 North American population to be between 6,000 and 10,000 birds. He arrived at this estimate beginning with a one day winter count of 3,346 mountain plovers at all known historical sites in California, assuming that at least one-half of all mountain plovers in California were missed by that count, and adding an estimated 1,000–3,000 birds that winter in Texas and Mexico.

Knopf (1994) reported that between 1986 and 1991, conservation populations of the mountain plover declined an estimated 53 percent. Breeding Bird Survey trend analysis contracted for the period 1966 through 1996 yields an annual mean annual rate of decline of 2.7 percent ($P = 0.02$, 95 percent confidence intervals −4.7, −0.6; Sauer et al. 1997). Knopf and Rupert (*in press*) hypothesized that reduced productivity as a result of tillage and mammalian loss used for nesting may explain the annual rate of decline of this species. The mountain plover is considered a major conservation concern (Knopf 1994, 1996b).

Previous Federal Action

On December 30, 1982, we designated the mountain plover as a category 2 candidate species, meaning that more information was necessary to determine whether the species status is declining, stable, or improving (47 FR 58455). In 1990, we prepared a status report on the mountain plover suggesting that Federal listing may have been warranted (Lesica and Communication 1993). We elevated the mountain plover to a category 1 candidate species in the November 15, 1991, Animal Candidate Notice of Review (59 FR 58982). At that time, category 1 candidates were defined as those species for which we had sufficient information on biological vulnerability and threats to support issuance of a proposed rule to list. In 1996, we redefined candidate species and eliminated category 2 and 3 candidate designations (61 FR 64481). Candidate species were defined using the old category 1 definition. The mountain plover remained in candidate species designation as reported in the September 19, 1997, Review of Plant and Animal Taxa (62 FR 49398). On Jul 7, 1997, we received a petition to list the mountain plover as threatened from Super Carbon of the Biodiversity Legal Foundation. The Service responded by stating that petitioned species nominations for candidate species are considered second petitions, because candidate species are species for which we have already decided that listing may be warranted. Therefore, no 90-day finding was required for Biodiversity Legal Foundation's petition.

Summary of Factors Affecting the Species

Section 4 of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*) and regulations (5 CFR part 424) promulgated to implement the listing provisions of th

Act set forth the procedures for adding species to the Federal lists. A species may be determined to be endangered or threatened due to one or more of the five factors described in section 4(a)(1). These factors and their application to the mountain plover, *Charadrius montanus*, are as follows:

A. The Present or Threatened Destruction, Modification, or Curtailment of its Habitat or Range.

As discussed below, mountain plover habitat is threatened by the conversion of grasslands to croplands and urban uses, domestic livestock management, and other land uses (e.g., prairie dog control, mineral development) throughout mountain plover breeding and wintering range.

Historical Conversion of Grassland in Breeding Range

Conversion of grassland to cropland within the breeding range of the mountain plover has been extensive, with about 32 percent of the grasslands in the Great Plains now converted (Laycock 1987, Knopf and Rupert *in press*). Approximately 20 percent of Wyoming's and 80 percent of Texas' shortgrass prairie has been lost (comparable data not available for each State, Samson and Knopf 1994, Knopf and Samson 1997). The demand for agricultural development at the turn of century stimulated widespread conversion to croplands at both breeding and wintering habitats. Conversion continued in later years to meet demands during World Wars I and II. In the 1940s, some additional land was plowed to take advantage of favorable precipitation and high prices, along with private subsidies (Knopf and Rupert 1995). Under the Soil Bank Act of 1956, participating farmers were compensated from production for 3–10 years. At the peak of the program in 1961, 1.4 million acres (ac) in the Great Plains were planted to grasses. Laycock (1987) suggests that observations that as much as almost all of this area was plowed again beginning in the early 1970s, along with previously unbroken grassland. Thus, the Soil Bank Program of 1956 was successful as a wildlife habitat conservation measure only in the short term. Later, during the Russian wheat sale of 1972 and authorization and implementation of Federal water projects in California's Central Valley, conversions of grassland continued (see Moore et al. 1990, Williams 1992). During the 1970s and 1980s, an estimated 572,000 ac (228,800 ha) and 15,000 ac (6,000 ha) of previously unbroken grassland were plowed in Colorado and Kansas (Laycock 1987).

Simultaneously, domestic livestock replaced native ungulates as the primary grazer at both breeding and wintering locations, and livestock management practices that encouraged vegetative uniformity were adopted (see Knopf 1996a, and Knopf and Rupert *in press*).

Current Conversion of Grassland in Breeding Range

We investigated recent loss of native rangeland within the breeding range of the mountain plover using the National Resources Inventory (NRI) of the U. S. Department of Agriculture Natural Resources Conservation Service (NRCS). The NRI is a comprehensive database of natural resource information on non-federal lands of the United States that focuses on soil, water, and related resources. Although the survey is now repeated every five years, the earliest NRI data is available from 1982 (U.S. Department of Agriculture Soil Conservation Service 1994). The 1992 NRI Summary Report provided estimates of change in rangeland acreage, 1982–1992, for each state. Rangeland was defined as land cover/use category that includes land on which the climax or potential plant cover is composed principally of native grasses, grass-like plants, forbs, or shrubs suitable for grazing, and introduced forage species that are managed like rangeland. We believe that this cover type would most likely represent the vegetative elements required by breeding mountain plovers.

Colorado, Montana, and Wyoming are the three States with the majority of breeding mountain plovers. Mountain plovers breed in Kansas, Nebraska, and Oklahoma. Using data obtained from Knowles and Knowles (1989) and Shackford and Leslie (1992b), we compared the acreage in rangeland that has occurred in their inventory area between 1982 and 1992. With the exception of Phillips and Blaine counties, Knowles and Knowles (1989) report more mountain plovers from Brookwater, Golden Valley, Jefferson, Madison, Valley, and wheatland counties than other locations in Montana. The counties inventoried by Shackford and Leslie (1992b) closely describe the area commonly reported as the mountain plover breeding range in Colorado, Kansas, Nebraska, Oklahoma, and Wyoming. We believe the 30 counties in the six states which we selected for review of NRI data are a good representation of areas either currently or historically occupied by mountain plovers.

Data were not available for all of the selected Montana counties. From 1982 to 1992, the amount of rangeland in the selected counties of Wyoming decreased 25,300 ac, in Colorado 466,200 ac, in Nebraska, 78,400 ac, in Kansas, 30,700 ac, and in Oklahoma 77,900 acres. These decreases occurred because of conversion to a variety of landuses, including cropland, developed land, and other rural lands (U. S. Department of Agriculture Soil Conservation Service 1994). These data suggest that the conversion of grasslands remains a significant threat to the species. Given the fact that mountain plovers are endemic to grasslands, we believe that a similar proportion of mountain plover habitat was likely lost during that time period. In fact, the conversion of grasslands to cropland is supported by many authors as a cause for the decline of mountain plovers and their habitat (e.g., Graul and Webster 1976, Faanes West 1991, Knopf and Rupert *in press*). Mountain plovers are known to breed on private grasslands near the Little Bell and Big Snowy mountains in Montana, on private lands within the boundary of the Pawnee National Grassland in Colorado, and in other areas that could be converted to croplands (Knowles and Knowles 1993, Knopf and Rupert *in press*). Three mountain plover nest sites on grasslands in central Montana were converted to cropland in 1995 under a farm plan approved by the Natural Resources Conservation Service. This grassland conversion is occurring at other locations in Montana (Knowles and Knowles 1993, 1998).

Cultivated Areas in Breeding Range as Potential Population Sinks

A direct loss of habitat is not the only effect of grassland conversion in the breeding range. Conversion may not only destroy existing mountain plover breeding sites (see Knowles and Knowles 1989b, 1993) and eliminate the opportunity to manage grasslands to provide future nesting sites (e.g., through burning and grazing), it also may create habitats that attract breeding mountain plovers which would then be exposed to the tilling of cultivated fiel to control weeds. This tilling can destroy mountain plover nests, eggs, and chicks (Shackford and Leslie 1992a,b; Knopf 1996b; Knopf and Rupert *in press*).

In the last 25 years, Great Plains' farms have become larger and new crops have become economically feasible. Many farmers now plant extensive acres to sunflowers and millet, as well as winter and spring wheat. Fields may remain fallow until early May, after most mountain plovers have started nesting. Many nests are then destroyed by farm equipment when the fields are planted in May. Mountain plovers may renest on these fields, but then likely

abandon nests as the crop crop becomes too tall to allow plovers to scan their surroundings for predators (Knopf 1998b). In other instances, fallow fields may not be planted, but may be tilled periodically to control weeds.

During the nesting season of 1995, Shackford and Leslie (1995b) searched 939 km annual cultivated fields in 8 counties of eight States. They observed 54 mountain plovers on a total of 29 cultivated fields in 5 counties in five of the eight States: Colorado, Montana, Nebraska, Oklahoma, and Wyoming. The majority of plovers observed on cultivated fields were in the southern portion of the range: 24 of 54 birds in Larsenle County, Wyoming (18 birds), southwestern Nebraska (2), and eastern Colorado (17). Shackford and Leslie (1995b) concluded that fewer birds are found nesting in cultivated fields in northern latitudes because upland crops are sparse in Montana and Wyoming where there is a shorter growing season, and spring wheat planted in northern latitudes is disturbed more frequently than the winter wheat planted in the south. The short intervals between disturbances for spring wheat would not normally allow enough time for breeding, nesting, and young rearing.

In 1993 and 1994, 48 percent of nests located on cultivated fields in Colorado, Oklahoma, and Kansas were destroyed by tilling (Shackford and Leslie 1995b). Although the long-term effect of tilling on mountain plover productivity and abundance is not known, cultivated lands may represent a reproductive "sink" (Knopf 1998b; Knopf and Rupert *In press*). William (1998) described the reproductive sink as habitat where reproduction of a species is less than mortality, so that immigration from more productive habitats (i.e., "sources") is needed to maintain the species' presence at the sink. Sinks are habitats where breeding efforts are misrepresented as recruitment into the population, but where the mortality actually exceeds productivity. declines. We concur with Knopf and Rupert (*in press*) that the source-sink dynamics (as described by Pulliam (1988)) are likely operating on the grassland-cultivated sites used by mountain plovers in Colorado, Kansas, and Oklahoma.

Many grasslands are not suitable breeding habitat, and therefore, are not used by mountain plovers. However, conversion of these grasslands also can be considered detrimental because such conversion may create locally acceptable habitat (Knopf and Rupert *In press*) on which mountain plovers are then exposed to tilling (i.e., creation of sink habitat, see above). Consequently, grassland conversion may be considered a threat to mountain plover conservation whether or not the grasslands are presently suitable breeding habitat, particularly when conversions are proposed within the southern portion of the bird's breeding range.

Grasslands in the breeding range also are being converted to urban areas. Nationwide, between 1982 and 1992, a 1.4 million acres (566,000 ha) increase in developed land came in part from conversion of 2 million ac of rangeland (U.S. Department of Agriculture Soil Conservation Service 1994). In Park County, Colorado, which may support about 1,000 mountain plovers, the number of residences building permits has tripled between 1991 and 1997 in areas of the County known to have breeding habitat (Ransom 1997; G. Nichols, Park County, Colorado, *in litt.* 1998).

Historical Conversion of Grassland in Winter Range

In the early 1900s, a great number of mountain plovers were reported on wintering grounds in California on both grasslands and agricultural lands (Grinnell et al. 1918). Over the intervening decades, however, grasslands occupied about 8.6 million ac (2.2 million ha) throughout California, with about 20 percent occurring in the San Joaquin Valley (Bassett 1965 and Burcham 1962 cited in Moore et al. 1990). During agricultural development, extensive conversion of natural habitats occurred and proportionately more grasslands were converted than any other cover type (Ewing et al. 1988, Moore et al. 1990). The amount and variety of mountain plover habitat has been significantly reduced throughout the Central Valley and in southern California. To more fully evaluate the degree of mountain plover habitat conversion that has occurred, we reviewed the habitat inventories completed for other declining terrestrial species in the San Joaquin Valley. While the San Joaquin Valley encompasses only the southern portion of the Central Valley, we believe the trend there is representative of wintering habitat degradation elsewhere.

Grasslands in the San Joaquin Valley have been nearly eliminated, with less than 60,700 ha (150,000 ac) in the San Joaquin Valley floor remaining unaffected by cultivation or urbanization (Service 1997). Consequently, habitats preferred by mountain plovers have been reduced to less than 4 percent of their historical abundance (Knopf and Rupert 1995, Anderson et al. 1991). Research in the San Joaquin Valley documents that wintering mountain plovers prefer Valley sink scrub and grasslands over any of the more intensively cultivated land (Anderson et al. 1991; Knopf and Rupert 1995). However, the sink scrub and grasslands occupy no more than about 26,400 ha (65,000 ac) of the San Joaquin Valley (Anderson et al. 1991). Mountain plovers in the San Joaquin Valley are dependent on these core areas of uncultivated land for early winter survival, and further loss of these areas would be detrimental to the rangewide (Knopf and Rupert 1995). Apparently due to the scarcity of uncultivated wintering habitat, mountain plovers use croplands created by annual cultivation as alternate foraging areas (Knopf and Rupert 1995). Such use may give the appearance that conversion to cropland is benign. However, mountain plovers may not benefit in the long term because the cultivated lands are commonly treated with pesticides and may become urbanized (American Farmland Trust 1988, Moore et al. 1990, Knopf 1998b). Most of the remaining undeveloped lands in the San Joaquin Valley are primarily in the foothills of the Valley, and are lands that have less potential for agricultural conversion (Moore et al. 1990, Service 1997). While the Carrizo Plain Natural Area contiguous to the west side of the Valley is designated as a regular wintering area, only about 10 percent of its 102,732 ha (254,000 ac) has vegetation and topography suitable for mountain plovers (U.S. BLM 1995, S. Ferron, *in litt.* 1995).

Effects of Range Management on Mountain Plover Habitat

Historically, nonirrigated plover habitat at both breeding and wintering sites was a byproduct of the nomadic behavior of bison, elk, antelope, prairie dogs and fossorial (digging) behavior of numerous rodents. Today prairie dogs and kangaroo rat numbers have been reduced on a significant portion of their considered for other declining terrestrial species in the San Joaquin Valley. While the San Joaquin Valley encompasses only the southern portion of the Central Valley, we believe the trend there is representative of wintering habitat degradation elsewhere.

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change frequently in time and location. The shift to livestock grazing strategies that favor uniform cover is believed to be partly responsible for the decline of mountain plovers in Oklahoma and Canada (Powers 1985, Wershler 1989). Mountain plovers are no longer reported from the Lewis Ranch in eastern Montana since elimination of grazing there in 1993 (Knowles and Knowles 1998). Mountain plovers on the Pawnee National Grassland are closely associated with prairie dog colonial sites. Therefore, in order to prevent deterioration of existing mountain plover breeding habitat, the Forest Service has deferred implementation of new grazing management plans that would have reduced stocking rates (Forest Service 1994b). However, similar attention to the vegetative requirements of mountain plovers is not in place throughout their breeding range. The decline in the cattle and sheep industry has caused additional rangeland to be converted to cropland, which is believed to have eliminated some of the mountain plover habitat in Montana (Feuna west 1991, Knowles and Knowles 1998).

Range management projects to improve forage conditions for domestic livestock are considered a threat to private lands throughout the range of the mountain plover. Examples of these projects include Public Law 566/1027 to increase moisture retention in the soil, introduction of exotic grass species such as crested wheatgrass, watershed improvement projects, and fire suppression (Graul 1982, Dame west 1991, Knowles and Knowles 1993). These activities enhance the development of taller vegetation and have eliminated suitable mountain plover nesting habitat in Montana and Colorado (Graul and Webster 1978, Knowles and Knowles 1993).

Effects of the Decline of Burrowing Mammals on Mountain Plover Habitat

The decline of the mountain plover is partially due to the decline of prairie dogs in plover breeding range and the decline of small burrowing mammals in plover winter range (Forrest et al. 1982; Fitton, *in litt.*, 1992, Knopf 1994).

Breeding Range

Mountain plovers occur within prairie dog towns in Colorado, Montana, Wyoming, and Oklahoma (Knowles et al. 1982; Flowers 1985; Shackford 1991; Godbey 1992; Nelson 1993; Edwards. *In litt.*, 1994; T. Byer, *In litt.*, 1997; S. Dinsmore, pers. comm., 1998). Active prairie dog towns in Montana have shorter vegetation and more abundant mountain plover food, and therefore are better foraging sites than adjacent sites without prairie dogs (Olson 1995). In Phillips County, Montana, mountain plovers were found to selectively use only those active prairie dog towns that also were grazed by cattle. mountain plovers were not seen on inactive or ungrazed prairie dog towns (Knowles et al. 1982). Most of the mountain plover nests found on survey transects in Phillips County during the past 6 years were located on prairie dog towns (S. Dinsmore, pers. comm., 1998). The largest population of mountain plovers in Montana occurs on prairie dog colonies. and between 1992 and 1996, prairie dog occupation of these colonies was reduced by as much as 68 percent as a result of sylvatic plague (J. Grenstein, pers. comm., 1998). Mountain plover numbers along prairie dog transect routes within the area affected by plague declined from 80 in 1991 to 19 in 1997, but increased to 27 in 1998 following some recovery of the prairie dog population (S. Dinsmore pers. comm. 1998). We believe that the best information available indicates that mountain plovers in Phillips County are dependent on the activities of prairie dogs. Because mountain plovers breeding in Montana represent a significant part of the species total population, eradication of prairie dogs in Montana would not only be detrimental to local conservation of plovers (Knowles and Knowles 1998), but also could impact their viability range-wide.

In Wyoming, prairie dogs on the Thunder Basin National Grassland effectively maintain the vegetative characteristics required by mountain plovers. To maintain these characteristics in the absence of prairie dogs, many require grazing by domestic livestock or native ungulates, or burning, would have to be conducted (T. Byer, pers. comm., 1998). The importance of prairie dogs to mountain plover habitat on the Pawnee National Grassland in Colorado was recently recognized following a significant reduction in habitat caused by record rainfall there in 1995. Prairie dogs on the Grassland have been effective in maintaining the vegetative structure suitable for nesting mountain plovers. while the vegetation at similar sites without prairie dogs is now too tall or dense to be suitable habitat for mountain plovers.

Prairie dog abundance and distribution has been reduced by up to 98 percent across the species range due to concerted efforts aimed at eradication of prairie dogs. extensive habitat reduction and fragmentation. and sylvatic plague (Marsh 1984, Whicker and Detling 1993, Miller et al. 1994, W. Gill, Service, *in litt.* 1994).

Prairie dog control activities conducted on private and public lands throughout the mountain plover's breeding range. Prairie dog conservation efforts now being implemented at black-footed ferret recovery sites in southeastern Wyoming (56 FR 14473) and north-central Montana (59 FR 42606) will prevent prairie dog control from threatening the success of the ferret recovery efforts. Mountain plovers at these sites will be incidentally protected by these efforts. but similar strategies are not in place throughout the species range. Outbreak of sylvatic plague continue to occur, and no measures are available to effectively prevent or minimize the negative effect of plague on prairie dog populations.

Prairie dog towns also are threatened by land use conversion (Knowles and Knowles 1993). Further loss of prairie dog towns within the current breeding range of the mountain plover would be detrimental to plover conservation. Conversely, the conservation of the mountain plover can be enhanced by implementing strategies to increase the distribution and abundance of prairie dogs on breeding habitat.

Wintering Range

Some wintering habitat in California continues to be maintained under suitable conditions by the activities of giant kangaroo rats and California ground squirrels (Knopf and Rupert 1995). We estimate that the federally listed giant kangaroo rat occupies less than about 2 percent of its former range due primarily to conversion of grassland habitat to agriculture and urbanization and secondarily to other incidental human activities and ~ years of California ground squirrels (32 FR 283). Further loss of giant kangaroo rat colonies within the current winter range would be detrimental to plover conservation. Conversely, the conservation of the mountain plover can be enhanced by implementing strategy to increase the distribution and abundance of giant kangaroo rats on wintering habitats.

Oil, Gas, and Mineral Development In Mountain Plover Breeding Habitat

Oil and gas leasing and development commonly occur throughout the breeding range of the mountain plover. Ongoing development of natural gas resources in southwest Wyoming now exceeds the rate of development projected 3 years ago. and the volume natural gas suspected to occur could make the rate of development the highest in the Nation (R. Amidon, BLI pers. comm., 1998). Oil and gas

development requires construction of individual well pads, access roads, travel corridors, and pipelines (Brockway 1992). Roads present a direct hazard for a variety of reasons. Mountain plovers nest on nearly level ground (often near roads), adults and chicks often feed on or near roads, and roads may be used as travel corridors by mountain plovers, all of which make plovers susceptible to being killed by vehicles (McCafferty 1930, Laun 1957, Godbey 1992, Knowles and Knowles 1996). Chicks and adults are vulnerable to stress caused by human disturbance, and chicks require shading by adults to avoid heat (Graul 1975). Because adults may abandon chicks during distraction displays (Graul 1975), any human activity that elicits distraction displays is likely to increase the vulnerability of chicks to stress. Thus, development of oil and gas resources could adversely affect mountain plover habitat or cause the death of individuals (Brockway 1992).

Mineral resources found within the range of the mountain plover include coal, uranium-vanadium, bentonite, and hard rock minerals. Many of these resources occur on public lands and are commonly mined using surface mining techniques. Up to 25 percent of the mountain plover habitat at the Antelope Coal Mine in Converse County, Wyoming, has been affected by mining disturbance in the past (K. Edwards, *in litt.*, 1994), but mountain plover sightings at the coal mine have remained fairly stable in recent years, and the habitat impacts may not have affected population levels (B. Postovit, Powder River Eagle Surveys, pers. comm., 1998). However, other surface coal mining is proposed in Wyoming that may impact mountain plovers or their habitat (M. Jennings, U.S. Fish and Wildlife Service, *in litt.*, 1998).

B. Overutilization for Commercial, Recreational, Scientific Educational Purposes

Prior to the passage of the Migratory Bird Treaty Act in 1916, mountain plovers were commercially hunted for food. There is no recent evidence that mountain plovers are overutilized for any purpose.

C. Disease or Predation

Disease-related factors are not known to be a problem to the species. Mountain plovers are most vulnerable to terrestrial and avian predators as eggs and chicks, and are only rarely killed as adults. Potential avian and terrestrial predators include the prairie falcon (*Falco mexicanus*), loggerhead shrike (*Lanius ludovicianus*), swift fox (*Vulpes velox*), ground squirrels (*Spermophilus* sp.), and coyote (*Canis latrans*) (Graul 1975). Nest predation at the Pawnee National Grassland has ranged between 15 to 74 percent from 1969 to 1994 (Graul 1975, Miller and Knopf 1993, Knopf and Rupert 1996). A high rate of nest predation by swift fox at the Pawnee National Grassland in 1993 and 1994 may have been due to temporarily reduced prey resources, and is not believed to be a factor in the long-term decline of the mountain plover population (Knopf and Rupert 1996).

D. The Inadequacy of Existing Regulatory Mechanisms

Protecting the mountain plover and its habitat is complicated because its breeding and wintering habitats occur over a wide geographic area, which includes private and public land, and numerous State and Federal authorities. Federal laws that provide protection of mountain plovers include the Federal Land Policy and Management Act, Federal Onshore Oil and Gas Leasing Reform Act, Endangered Species Act, Fish and Wildlife Coordination Act, Federal Agriculture Improvement and Reform Act of 1996, and Migratory Bird Treaty Act. To various degrees, these laws address Federal candidate species, migratory birds, or declining species when evaluating potential effects of federally authorized, funded, or permitted actions. Further, some Federal agencies have adopted policies requiring consideration of declining species during project review, to ensure that Federal actions do not cause a trend toward Federal listing. However, the effectiveness of these existing Federal regulations and policies are highly variable and may not be sufficient to reverse the species' decline throughout its range.

The Forest Service has adopted an interim mountain plover management strategy for oil and gas activities on the Pawnee National Grassland because of the potential impact these activities would have on the species (U.S. Forest Service 1994). The BLM has adopted the same strategy for oil and gas activities under its administration at the same location (U.S. BLM 1994). Spatial buffers to protect mountain plovers have also been adopted on Forest Service and Bureau lands in Colorado, Wyoming, and Utah (M. Ball, Forest Service, *in litt.*, 1997; T. Byer, *in litt.*, 1997; T. Debbs, *in litt.*, 1997). However, many of the mineral resources occur as split estate ownership, where the surface is owned by the Federal government but the subsurface minerals are owned by private parties. Strategies adopted by Federal agencies to protect mountain plovers are not as effective on split estate lands because the Federal Government has less regulatory authority over private surface activities. In southwest Wyoming the "checkerboard" pattern of alternating private and public land (Federal and State sections) also reduces the effectiveness of Federal plover conservation measures.

Land exchange or disposal by Federal agencies may also involve mountain plover habitat. For example, land exchanges on the Thunder Basin National Grassland in Wyoming have resulted in transfer of known nesting habitat to private ownership, as well as transfer of nesting habitat on private land to Forest Service ownership (T. Byer, pers. comm., 1998). In Colorado, the BLM has identified numerous parcels of public land that are available for exchange or disposal to the public, including parcels in Park County known to be mountain plover habitat (L. Deike, BLM, *in litt.*, 1997). Disposal of these lands requires review by the BLM, yet the candidate status of the mountain plover may not be effective as a mechanism to retain all breeding sites in public ownership (E. Brekke,BLM, pers. comm., 1998). While federal ownership of mountain plover habitat is not necessary to insure conservation, retaining known habitat in federal ownership reduces the burden of conservation on private landowners.

The mountain plover is now classified as endangered in Canada, threatened in Nebraska, a "species of special interest or concern" in Montana, Oklahoma, and California, and designated a "species in need of conservation" in Kansas (Wershler and Wallis 1986; Flath 1984; E. Hunt, California Department of Fish and Game, *in litt.*, 1990; Nebraska Game and Parks Commission 1992; Oklahoma Department of Wildlife Conservation 1992; Kansas Department of Wildlife and Parks 1992). The mountain plover is currently believed to be extirpated from North Dakota and South Dakota (Faanes and Stewart 1982). Only California and Nebraska have laws requiring evaluation of State-listed species through a consultation process. States other than those identified above have not given the mountain plover any special designation. In 1995, Colorado, Kansas, Montana, Nebraska, New Mexico, Oklahoma, and Wyoming, designated the mountain plover as a "species of management concern" unde the Partners in Flight Program (Service, *in litt.*, 1995). It is not known if the bird has any official designation in Mexico.

State listing can encourage State agencies to use existing authorities to achieve recovery, stimulate research,

and allow redirection of priorities within State natural resource departments. However, without measures to protect the species' habitat, such State laws are generally inadequate to ensure conservation of the species.

E. Other Natural or Manmade Factors Affecting its Continued Existence

Natural Factors Affecting Nesting

Mountain plover nests are often found grouped in localized areas, which suggests a loose colonialism during the breeding season (Graul 1975). Results of studies conducted in Colorado and Montana suggest a high degree of site fidelity in mountain plovers, with both males and females returning to nest within several hundred meters of the previous year's nest site, and banded chicks returning as adults the following year to nest at their natal areas (Graul 1973, Knopf 1996b).

The mountain plover's narrow range of habitat requirements combined with its site fidelity increases its vulnerability to impacts at traditional breeding locales. Although mountain plovers or their habitat may be affected by localized climatic events (Graul 1973, 1975), we do not believe such events have contributed to the historic decline of the species. However, a declining mountain plover population combined with high site fidelity characteristics may increase their vulnerability to such events in the future. For example, the Pawnee National Grassland received 30 cm (12 in) of rainfall in one month during the spring of 1995 (Ball, *in litt.* 1997) which caused vegetation growth in 1995 that averaged 30 cm (12 in) in height, thereby eliminating mountain plover nest site characteristics. Independent surveys determined that mountain plover abundance on the Pawnee National Grassland has declined by as much as 90 percent compared to the pre-1995 surveys (Ball, *in litt.*, 1997; F. Knopf, *in litt.*, 1997). In 1998, mountain plovers were not observed at their traditional nesting sites on the Pawnee National Grassland, suggesting that the deteriorated habitat conditions have caused mountain plovers to abandon much of this area (F. Knopf, *in litt.*, 1998). Similarly, researchers witnessed the destruction of all nests and chicks in a given area during a single flash flood event in 1997 in central Montana (C. Knowles, pers. comm., 1998). Therefore, climatic events that render areas unsuitable for nesting may mean that birds who return to that area for nesting must expend additional time and energy locating a suitable alternative area. This search may result in a decreased reproductive success for that year. The long-term effect of such naturally occurring catastrophes on mountain plover viability is not known, but populations at low abundance are more vulnerable to extirpation by such events. Naturally occurring events can increase the risk of extirpation at local breeding sites.

Manmade Factors Affecting Nesting

In addition to loss of habitat, human disturbance during the nesting period may directly impact mountain plovers due to their sensitivity to stress (Wershler and Wallis 1986). Mountain plover chicks less than 2 weeks old may die in 15 minutes if shade is not available on days when the temperature exceeds 27° C (81° F) (Graul 1975). Adults have been known to abandon eggs after being disturbed on the nest, and adults also may die from stress (Graul 1975). Consequently, any human activity that significantly modifies behavior by adults will not only increase the exposure of chicks to natural elements, but also will increase the vulnerability of adults to stress-related mortality.

Grasshoppers that occur throughout the breeding range of the mountain plover can reach population levels considered a threat to agriculture, and stimulate grasshopper control measures. Although cooperative grasshopper control programs between the Animal and Plant Health Inspection Service (APHIS) and private land owners have been abandoned, federally-subsidized control can be implemented if a severe grasshopper outbreak occurs and congressional funding is provided (L. McEwen, Colorado State University, pers. comm., 1998). Grasshopper control methods can reduce the abundance of grasshoppers by more than 90 percent, as well as reduce the abundance of nontarget insects (Fair et al. 1995). Although control is designed to reduce rather than eradicate grasshoppers, mountain plover productivity may be influenced by a reduction in prey abundance (Animal and Plant Health Inspection Service 1987, Graul 1973, Knopf 1996b, Knopf and Rupert 1996).

In addition, mountain plovers are at risk from increased metabolism of DDE residues if their foraging behavior is altered to compensate for this reduced insect abundance (U.S. Environmental Protection Agency (EPA) 1975, Fair et al. 1995). Grasshopper control subsidized by APHIS is designed to minimize impacts to wildlife species; however, due to the reduction in Federal programs to control grasshopper infestations, private landowners may choose control methods that increase the contaminant risk to mountain plovers. Therefore, grasshopper control on breeding habitat is considered a potential threat to mountain plovers.

Manmade Factors—Wintering

In California, pesticides are applied to cultivated fields during the 5 months that mountain plovers occupy these wintering habitats (Knopf 1996b). Birds are exposed to pesticides by adsorption through the skin, preening, ingestion, and inhalation (Driver et. al. 1991). To investigate the potential threat of pesticides to mountain plovers, adults were collected from wintering habitats and eggs were collected from breeding habitats (F. Knopf, *in litt.*, 1991). The adults and eggs were analyzed for concentration of organochlorines (hydrocarbon pesticides), selenium, and heavy metals. Forty whole-body samples of adults from the San Joaquin Valley had residues of DDE (a principal environmental metabolite of DDT) ranging from near 1 to 10 parts per million (L. Carlson, Service, *in litt.*, 1992; A. Archuleta, Service, pers. comm., 1995). Twenty-two of the 54 eggs collected in Colorado and Montana had DDE residues similar to those founc in the wintering birds.

Although these DDE residues in eggs do not appear detrimental to mountain plover reproduction, residues found in adults may cause death to some individuals if they are mobilized to the brain (U.S. Environmental Protection Agency 1975). While average selenium concentrations found in samples from winter habitats are below thresholds that would cause concern for populatio level effects, individual mountain plovers may be at risk in some location (J. Skorupa, Service, pers. comm., 1993 A. Archuleta, pers. comm., 1995). Heav metal concentrations were within acceptable thresholds (A. Archuleta, pers. comm., 1995).

We have confirmed that the field application of 27 pesticides is responsible for killing numerous speci of birds throughout the Natio [illegible] Smith, U.S. Fish and Wildlife Service, *in litt.*, 1992). Diazinon, dimethoate, mevinphos, and chlorpyrifos are included on this list of 27 pesticides, and are commonly applied to a variety of agricultural crops in Imperial Count and the Central Valley of California from November through February (California Department of Pesticide Regulation, *in litt.*, 1998). Ten other pesticides identified by the Service (R. Smith, *in litt.*, 1992) as toxic to birds also are used in Imperial County and t Central Valley, but primarily during times when mountain plovers are absent. Studies conducted in the San

Joaquin Valley, California, to determine exposure of mountain plovers to organophosphates and carbamates were inconclusive. Cholinesterase activity levels of mountain plovers from the exposed site were consistently higher than those at the reference site, yet significant cholinesterase inhibition was not detected in any mountain plover (W. Ilo, USGS-Biological Resources Division, *in litt.*, 1997).

Conclusion

In summary, threats to mountain plovers occur at both breeding and wintering locales. Conversion of rangeland to croplands has been significant on breeding habitat which about 30 percent of rangeland in the Great Plains were converted to crops. The cultivated lands now interspersed with prairie in the southern part of the plover's breeding range are hypothesized to represent a reproductive sink, which may significantly impact maintenance of a viable population. Similarly in the San Joaquin Valley, a significant wintering area, only 60,700 ha (150,000 ac) of the valley bottom remains currently uncultivated, and less than half of that may qualify as potential habitat. Throughout the breeding range, bison are functionally extinct, prairie dogs have been considerably reduced, and current domestic livestock grazing management does not always promote the vegetation and bare ground structure required by mountain plovers. Similarly, the native herbivores that once maintained wintering habitats in California are either functionally or virtually extinct. Oil and gas development occurs on core breeding sites on the Pawnee National Grassland, and is presently developing rapidly in southwest Wyoming. Rangeland grasshopper control may impact mountain plover productivity on breeding habitats, and mountain plovers are exposed to pesticide use while on wintering habitat.

We have carefully assessed the best scientific and commercial information available regarding the past, present, and future threats faced by the mountain plover in determining to issue this proposed rule. The current distribution and abundance of mountain plovers is at risk given the potential for these impacts to continue. Federal listing under authority of the Act is the only mechanism we can presently identify that ensures protection to the mountain plover throughout its life cycle and throughout its range, on both public and private lands. Therefore, based on this evaluation, the preferred action is to list the mountain plover (*Charadrius montanus*) as a threatened species. While not in immediate danger of extinction, we believe the mountain plover is likely to become an endangered species in the foreseeable future unless measures are taken to reverse the decline resulting from the above described threats.

Critical Habitat

Critical habitat is defined in section 3(5)(a) of the Act as: (i) the specific areas within the geographical area occupied by a species, at the time it is listed in accordance with the Act, on which are found those physical or biological features (I) essential to the conservation of the species and (II) that may require special management considerations or protection and; (ii) specific areas outside the geographical area occupied by a species at the time it is listed, upon a determination that such areas are essential for the conservation of the species. The term "conservation" as defined in section 3(3) of the Act means "to use and the use of all methods and procedures necessary to bring any endangered or threatened species to the point at which the measures provided pursuant to the Act are no longer necessary." I.e., the species is recovered and can be removed from the list of endangered or threatened species pursuant to section 4(a)(3) of the Act, as amended, and implementing regulations (50 CFR 424.11) requires that, to the maximum extent prudent and determinable, the Secretary designate critical habitat at the time the species is determined to be endangered or threatened. Our regulations (50 CFR 424.12(a)(1)) state that designation of critical habitat is not prudent when one or both of the following situations exist—(1) use of this species is threatened by taking or other human activity, and identification of critical habitat can be expected to increase the degree of threat to the species, or (2) such designation of critical habitat would not be beneficial to the species. We find that designation of critical habitat for the plover is not prudent because there would be no benefit to the species above that being beyond that conferred by listing it as threatened. The reasons for our conclusion, including the factors considered in weighing the potential benefits against the risks of designation, are provided below.

Potential benefits of critical habitat designation derive from section 7(a)(2) of the Act, which requires Federal agencies, in consultation with us, to ensure that their actions are not likely to jeopardize the continued existence of listed species or to result in the destruction or adverse modification of critical habitat of such species. Critical habitat, by definition, applies only to Federal agency actions. The 50 CFR 402.02 defines "jeopardize the continued existence of" as meaning to engage in an action that would reasonably be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species. "Destruction or adverse modification" of critical habitat is defined as a direct or indirect alteration that appreciably diminishes the value of critical habitat for both the survival and recovery of a listed species. Such alterations include, but are not limited to, alterations adversely modifying any of those physical or biological features that were the basis for determining the habitat to be critical. Thus, in the section 7(a)(2) consultation process, the jeopardy analysis focuses on potential effects on the species' populations, whereas the destruction or adverse modification analysis focuses on the value of habitat to the species. However, both jeopardizing the continued existence of a species and adversely modifying critical habitat have similar standards and similar threshold for violation of section 7 of the Act. Biological opinions that conclude that a Federal agency action is likely to adversely modify critical habitat but is not likely to jeopardize the continued existence of the species for which critical habitat has been designated are extremely rare historically; none have been issued in recent years.

The mountain plover's distribution and biology are particularly relevant to the not prudent determination, as it relates to the section 7 consultation process discussed above. The mountain plover is a neotropical migratory bird found in 11 different States in the western and southwestern United States and Mexico. It occurs primarily in prairie or sites with grassland characteristics, including mesquite landscapes such as sod farms and cultivated fields, and areas heavily grazed by cattle. Mountain plovers commonly occur on public lands at both breeding and wintering locales. The best-documented mountain plover breeding areas include lands managed by either the BLM or Forest Service in Montana and Colorado. Breeding and wintering mountain plovers occur on other Federal lands in each of these States, as well as in Wyoming, Utah, New Mexico, and California. The habitat in the other locations may be managed by the above agencies, or in a few cases by the

Service or the Department of Defense. In addition to their occurrence on Federal lands, mountain plovers also occur on private lands which may be enrolled in Federal programs that support commodity production. Federally sponsored activities on private land will receive the benefit of section 7 consultation, regardless of whether or not critical habitat is designated.

As stated above, the mountain plover is a migratory bird that has a wide distribution throughout its breeding and winter range. While mountain plovers demonstrate a degree of fidelity to breeding locations, specific nest site locations can vary from year to year depending on availability of essential habitat elements. Studies of mountain plovers on winter habitat in California have shown that winter site fidelity is poorly developed, and flocks of birds may travel over 55 km (33 miles (mi)) between alternate foraging sites. Further, the mountain plover demonstrates an affinity for sites with a mosaic of short vegetation and bare ground. These attributes are subject to change annually in precipitation and distribution due to either natural (e.g., fire, succession, seasonal precipitation) or human-created (e.g., drought, intensity, range management) events. It would be impractical to designate specific geographic locations as critical habitat when the essential elements of that habitat may shift temporally and are spatially across the landscape.

Designation of critical habitat may provide a minor benefit in that it may assist in securing funding or acquiring land for conservation. In some cases, the designation of critical habitat may provide some benefits to a species by identifying areas important to the species conservation, including habitat that is not presently occupied and the process discussed above. The mountain plover is a neotropical migratory bird found in 11 different States in the western and southwestern United States and Mexico. Certain grassland sites or sites with grassland characteristics, including mesquite landscapes such as sod farms and cultivated fields, and areas heavily grazed by cattle. Mountain plovers commonly occur on public lands at both breeding and wintering locales. The best-documented mountain plover breeding areas include lands managed by either the BLM or Forest Service in Montana and Colorado. Breeding and wintering mountain plovers occur on other Federal lands in each of these States, as well as in Wyoming, Utah, New Mexico, and California. The habitat in the other locations may be managed by the above agencies, or in a few cases by the agencies of its habitat (for example tilling nests, tilling grassland habitat), or disturbance caused by birders, the destruction of critical habitat and the publication of maps providing locations and descriptions, as required for the designation of critical habitat, would reasonably be expected to increase the degree of threat to the species and its habitat, increase the difficulties of law enforcement, and further contribute to the decline of the mountain plover.

Therefore, because the mountain plover is widely distributed on Federal lands and also may occur on private lands enrolled in Federal programs, the designation of critical habitat would provide little additional benefit beyond that provided by the jeopardy standard under section 7 regulations. In addition, the mountain plover's affinity for habitat elements that are likely to change frequently at both breeding and wintering locales strongly suggest that the biological value of any critical habitat designation would be short lived. Lastly, designation brings about the potential for an increased risk of intentional destruction of birds or their habitat. Consequently, we have determined that the designation of critical habitat for the United States population of the mountain plover is not prudent.

Available Conservation Measures

Potential conservation measures to reverse the declining trend for this species might include incentives to landowners to leave some cultivated areas unplanted until plover eggs have hatched, grazing plans for native range that encourage high grazing intensity by plover nesting areas, heavy and grazing on existing Conservation Reserve Program tracts to manage for the grass height and density required by nesting plovers, and seeding criteria for new Conservation Reserve Program tracts that would encourage establishment of native shortgrass prairie species in preference to taller grasses. The Service is initiating discussions with the Natural Resources Conservation Service to explore ways, such as the Conservation Reserve Enhancement Program, that these measures might be implemented on private land.

Conservation measures provided to a species listed as endangered or threatened under the Act include recognition, recovery actions, requirements for Federal protection, and prohibitions against certain practices. Recognition through listing encourages and leads to the implementation of conservation actions by Federal, State, County, and private agencies, groups, and individuals. The Act provides for possible land acquisition and cooperation with the States, and requires that recovery actions be carried out for all listed species. Such actions are initiated by us following listing. The protection required of Federal agencies and the prohibitions against taking and harm are discussed, in part, below.

Section 7(a) of the Act requires Federal agencies to evaluate their actions with respect to any species that is proposed or listed as endangered or threatened, and with respect to its critical habitat, if any is being designated. Regulations implementing this interagency cooperative provision of the Endangered Species Act are codified at 50 CFR part 402. Section 7(a)(4) of the Act requires Federal agencies to confer informally with us on any action that is likely to jeopardize the continued existence of a proposed species or result in destruction or adverse modification of proposed critical habitat. If a species is listed subsequently, section 7(a)(1) provides that all Federal agencies shall utilize their authorities in furtherance of the purpose of the Act by carrying out programs for the conservation of species listed pursuant to the Act. Further, section 7(a)(2) of the Act requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of such a species or to destroy or adversely modify its critical habitat. If a Federal action may affect a listed species or its critical habitat, the responsible Federal agency must enter into formal consultation with us. Consequently, Federal lifting will cause all Federal agencies to consider mountain plover conservation needs in taking their actions; however, they may fund, authorize, or carry out.

Section 10(a)(2)(A) of the Act allows for the incidental taking of federally listed species on private lands, where the Federal agency action would provided the applicant adopts a habitat conservation plan (HCP) to minimize the degree of take while furthering the conservation of the species. We anticipate that HCPs will be requested should the mountain plover become a federally listed species. We encourage and will participate in the development of HCPs to ensure that mountain plovers can be conserved throughout their range while authorizing incidental take associated with otherwise lawful activities. We believe that habitat modification techniques shown to be effective for the mountain plover can be incorporated into HCPs that may be implemented at breeding or wintering locales.

A unique Memorandum of Agreement (MOA) was signed in 1998 by the Secretary of the Department of the Interior and the Governor of Colorado. The purpose of the MOA is to address the conservation needs of declining species in Colorado, with a goal of preventing their decline to a point at which Federal listing could be needed. The mountain plover is mentioned specifically in this MOA, and a work group now exists to address its needs. We have participated diligently with the work group to pursue the goals of the MOA and believe that the MOA can be an effective vehicle to promote and implement mountain plover conservation actions in Colorado, and perhaps encourage similar conservation actions in adjoining States.

Mountain plovers occur on lands administered by the Service, Forest Service, BLM, and other agencies. For all public lands where mountain plovers occur, the Act would require the appropriate land management agency to evaluate potential impacts to mountain plovers that may result from activities they fund, authorize, or carry out. The Act requires consultation under section 7 of the Act for activities on private lands, including tribal lands, that may impact the survival and recovery of the mountain plover, if such activities are funded, authorized, or permitted by Federal agencies. The Federal agencies that may be involved as a result of this proposed rule include the Service, BLM, Forest Service, APHIS, Bureau of Indian Affairs, Natural Resources Conservation Service, Farm Services Agency, Department of Defense, Department of Energy, Department of Justice, and the EPA.

Federal agency actions that may require conference and/or consultation as described in the preceding paragraphs include:

(1) Removing, thinning or altering vegetation. Mountain plover nest sites have short vegetation, while taller vegetation may be required by chicks for shade and hiding cover;

(2) Modifying topography and soils at breeding sites. Mountain plover nest sites are on land with less than 5 percent slope, and usually have at least 30 percent bare ground. Any activity that alters one of these characteristics would likely be detrimental;

(3) Domestic livestock grazing management. The current state of knowledge indicates that domestic livestock grazing intensity influences the quality of mountain plover habitat. Review of grazing management proposals would be necessary to determine their compatibility with the mountain plover and its habitat. Those proposals that adversely affect a species or its habitat (e.g., altering vegetative structure or composition that destroys suitable habitat characteristics) would require reasonable and prudent alternatives or reasonable and prudent measures to minimize incidental take;

(4) Controlling burrowing rodents. Prairie dogs, giant kangaroo rats, and California ground squirrels are known to create suitable conditions for mountain plovers;

(5) Conversion of untilled grassland to tilled land. While mountain plovers are found on grasslands, they are associated to cultivated lands for foraging opportunities and nesting, which makes them vulnerable to effects from tilling and pesticide application. Therefore, cultivated lands are likely a reproductive sink. Therefore, Federal projects that encourage conversion of grasslands to cultivated land could be detrimental to the conservation of the mountain plover;

(6) Human activities near nesting mountain plovers. Federal proposals or permits for activities that would create disturbance during the nesting period could interfere with normal nesting behavior and result in the death of eggs, chicks and/or adults;

(7) Registration of pesticides. We have documented that numerous pesticides are toxic to bird species. Their application and some of these pesticides are used within mountain plover occupy breeding and wintering habitats;

(8) Oil, gas, or mineral development on known nesting or wintering habitat.

The Act and implementing regulations found at 50 CFR 17.21 and 17.31 set forth a series of general prohibitions and exceptions that apply to all threatened wildlife. The prohibitions, codified in 50 CFR 17.21 and 17.31, in part, make it illegal for any person subject to the jurisdiction of the United States to take (included harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect; or attempt any of these), import or export, ship in interstate commerce in the course of commercial activity, or sell or offer for sale in interstate or foreign commerce any such species. It also is illegal to possess, sell, deliver, carry, transport, or ship any such wildlife that has been taken illegally. Certain exceptions apply to agents of the Service and conservation agencies.

Under certain circumstances, permits may be issued to carry out otherwise prohibited activities involving threatened wildlife species. Regulations governing permits are codified at 50 CFR 17.32. Such permits are available for scientific purposes, enhancement of propagation or survival of the species, educational purposes, zoological exhibition, incidental take in connection with otherwise lawful activities, and/or other special purposes consistent with the purposes of the Act. Requests for copies of the regulations regarding listed wildlife and inquiries about prohibitions and permits may be addressed to the Permits Branch, U.S. Fish and Wildlife Service, P.O. Box 25486, Denver Federal Center, Denver, Colorado 80225–0486 (telephone 303/ 275–2370; facsimile 303/275–2371).

We adopted a policy on July 1, 1994 (59 FR 34272), to identify, to the maximum extent practicable, at the time a species is proposed for listing, those activities that would or would not constitute a violation of section 9 of the Act. The intent of this policy is to increase public awareness of the effect of the listing proposal and ongoing activities within a species' range. We believe that the actions listed below would potentially result in a violation of section 9:

(1) Activities authorized, funded, or carried out by Federal agencies (e.g., grazing management, agricultural conversions, range management, rodent control, mineral development, oil and gas development, road construction, human recreation, and pesticide application) when such activity is conducted in occupied habitat with any reasonable and prudent measures given to it in accordance with section 7 of the Act;

(2) Within the breeding range, normal farming practices on cultivated lands, prescribed burns, and construction/ maintenance activities (e.g., fences, power lines, pipelines, and utility lines) conducted when mountain plovers are not present or breeding habitat. The period when activities would not impact mountain plovers may vary at specific locations, but would usually fall between August 10 and April 1;

(3) Within the wintering range, normal winter farming practices on sod farms and tilled cropland;

(4) Casual, dispersed human activities on foot or horseback at breeding and wintering habitat (e.g., walking, bird hunting, bird watching, sightseeing, photography, camping, and hiking);

(5) Normal, routine domestic livestock grazing, herding, and inspecting, including maintenance of livestock improvement structures; and

(6) Application of pesticides in accordance with label restrictions or County Bulletins that have resulted from Endangered Species Act consultation.

We believe that the actions listed below might potentially result in a violation of section 9; however, possible violations are not limited to these actions alone:

(1) Unauthorized collecting or handling of the species;

(2) The unauthorized destruction of mountain plovers including adults, nests, eggs, and/or young by any human activity, or any human activity resulting in actual death or injury to the species by significantly impairing essential behavioral patterns (e.g., breeding, feeding, sheltering). Examples of human activities may include disking or tilling on cultivated land during the breeding season; land leveling, conversion of grassland to cropland, road construction, water development, range management, mineral development, or off-highway vehicle use, in any season on non-cultivated lands that are used as nesting habitat;

(3) Application of pesticides in violation of County Bulletins or label restrictions; and

(4) Interstate or foreign commerce (commerce across State or international boundaries) and importation (as discussed earlier in this section) without having obtained a threatened species permit. Permits to conduct these activities are available for purposes of scientific research and enhancement of propagation or survival of the species.

Questions regarding whether specific activities, such as changes in land use, will constitute a violation of section 9 should be directed to the Assistant Field Supervisor (see ADDRESSES section).

The prohibition against intentional and unintentional "take" of listed species applies to all landowners regardless of whether or not their lands are within critical habitat (see 16 U.S.C. 1538(a)(1), 1532(1a), and 50 CFR 17.3). Section 10a(1)(B) authorizes, through issue permits for the taking of listed species incidental to otherwise lawful activities such as agriculture, surface mining, and urban development. Incidental take permits must be supported by an HCP that identifies conservation measures that the permittee agrees to implement to conserve the species, usually on the permittee's lands. Therefore, no-till practices that leave tall stubble may successfully assist plovers in avoid cropland. On fallow ground, the type of farm implement used and the timing of the use may be significant in producing more plovers. These and other techniques to avoid plovers or produce plovers can be examined by producers in the development of an HCP. A key element in our review of an HCP is a determination of the plan's effect upon the long-term conservation of the species. We would approve an HCP, and issue a section 10(a)(1)(B) permit, if the plan would minimize and mitigate the impacts of the taking to the extent practicable and reduce the likelihood of the survival and recovery of that species in the wild.

Public Comments Solicited

We intend that any final action resulting from this proposal will be as accurate and as effective as possible. Therefore, comments or suggestions from the public, other concerned governmental agencies, the scientific community, industry, or any other interested party concerning this proposed rule are hereby solicited.

We are seeking comments particularly concerning:

(1) Biological, commercial trade, or other relevant data concerning any threat (or lack thereof) to the mountain plover;

(2) The location of any additional breeding, wintering, or migration sites, including areas in Mexico and Canada;

(3) Additional information concerning mountain plover distribution, population size and/or population trend;

(4) Information regarding current or planned land uses, and their possible beneficial or negative impacts on the mountain plover or its habitat (e.g., agricultural conversions, oil and gas development, land exchanges, range management, habitat conservation plans, conservation easements);

(5) Information regarding mountain plovers on their wintering habitats (e.g., preferential use of natural versus agricultural habitats, habitat distribution and abundance, daily routines, night roosts, site fidelity, population abundance);

(6) Additional biological or physical elements that best describe mountain plover habitat, that could be considered essential for the conservation of the mountain plover (e.g., burrowing rodent colonies, vegetation, food, topography);

(7) Information relative to mountain plover distribution and productivity on cultivated lands, shortgrass prairie, and shrub-steppe habitats;

(8) Alternative farming practices that will reduce or eliminate the take of mountain plovers;

(9) Other management strategies that will conserve the species throughout its range; and

(10) Information regarding the benefits of critical habitat designation.

Final promulgation of the regulations on this species will take into consideration the comments and any additional information received by us. Such communications may lead to a final regulation that differs from this proposal.

The Act provides for one or more public hearings on this proposal, if requested. Requests must be received within 45 days of the date of publication of the proposal in the Federal Register. Such requests must be made in writing and addressed to the Assistant Field Supervisor (see ADDRESSES section).

Executive Order 12866 requires each agency to write regulations that are easy to understand. We invite your comments on how to make this rule easier to understand including answers to questions such as the following: (1) Does the requirement in the rule clearly stated? (2) Does the rule contain technical language or jargon that interferes with its clarity? (3) Does the format of the rule (grouping and order of sections, use of headings, paragraphing, etc.) aid or reduce its clarity? (4) Would the rule be easier to understand if it were divided into more (but shorter) sections? (5) Is the description of the rule in the SUPPLEMENTARY INFORMATION section of the preamble helpful in understanding the rule? What else could we do to make the rule easier to understand?

Send a copy of any comments that concern how we could make this rule easier to understand to: Office of Regulatory Affairs, Department of the Interior, room 7229, 1849 C Street, NW, Washington, DC 20240. You may also e-mail the comments to this address: Execsec@ios.doi.gov.

National Environmental Policy Act

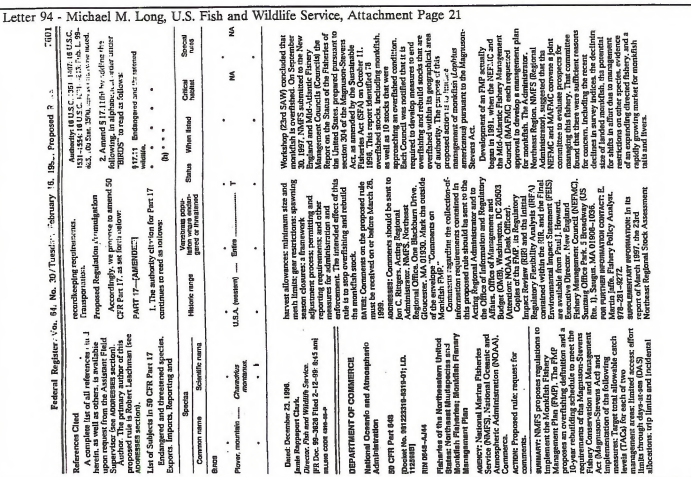
We have determined that Environmental Assessments and Environmental Impact Statements, as defined under the authority of the National Environmental Policy Act of 1969, need not be prepared concerning regulations adopted pursuant to section 4(a) of the Act of 1973, as amended. A notice outlining our reasons for this determination was published in the Federal Register on October 25, 1983 (48 FR 49244).

Required Determinations

This rule does not contain any new collections of information other than those already approved under the Paperwork Reduction Act. 44 U.S.C. 3501 *et seq.*, and assigned Office of Management and Budget clearance number 1018–0094. An agency may not conduct or sponsor, and a person is not required to respond to a collection of information, unless it displays a currently valid control number. For additional information concerning permit and associated requirements for threatened species, see 50 CFR 17.32.

Letter 94 - Michael M. Long, U.S. Fish and Wildlife Service, Attachment Page 20

Letter 94 - Michael M. Long, U.S. Fish and Wildlife Service, Attachment Page 21



7.2.94.2 Letter 94 Comment Response

Comment Response: Entire Letter - Thank you for taking the time to review the DEIS and for providing your comments. The BLM considers all comments during preparation of an EIS.

Comment Response 1 - Comment noted.

Comment Response 2 - The BLM believes the alternatives provided in the DEIS are sufficient for the NEPA process and that they provide augmented environmental protection for the most sensitive area resources present on federal lands. The BLM concurs that under Alternatives A or B overall disturbance within SRAs may be no different from that of the Proposed Action; however, since additional disturbance above the Alternative A and B thresholds would occur on private land, the BLM's authority is limited. Development on federal lands to protect areas from drainage could occur under any alternative, and if Alternative A or B is selected, this development could temporarily result in the exceedance of disturbance acreage thresholds; however, all other mitigations would remain in place, and the BLM would require Operators to reclaim areas as soon as possible to bring disturbance levels into compliance.

While the ROD for this project will identify specific mitigation requirements, the BLM believes that specific mitigations belong under any alternative potentially selected. Please note that while no power lines have been specifically identified for this project, if they are necessary, they would not be built within 0.6 mi of sage grouse leks (see DEIS Section D-2.3.3). This mitigation measure has been added to this FEIS (see Section 4.2.3.2).

Comment Response 3 - Regardless of whether oil and gas operating procedures are improved (i.e., decreased acreage requirements), the proposed project still exceeds the reasonably foreseeable development estimate provided in the GDRA RMP; however, the BLM will not authorize development that exceeds this estimate. The improvement in oil and gas operating procedures are provided in DEIS Section 1.2.4 to show that, while total well numbers in the RFO area may exceed the numbers identified as reasonably foreseeable in the RMP, total impacted acreage remains, at present, less than that anticipated in the RMP. The BLM concurs and the analyses in the DEIS show that impacts occur beyond the actual area of surface disturbance (e.g., indirect effects associated with human presence, traffic).

Comment Response 4 - The BLM believes the disturbance acreage estimates provided in the DEIS are valid. RMP estimates of 11.2 acres/well were developed prior to our current understanding of oil and gas development in the RFO area and did not include recent efficiencies in field development. The 9.0 acres per well was developed based on existing long-term disturbance acreage estimates from the CD/WIIPA. The 4.02 acres/well comes from past NEPA analyses for RFO area projects, many of which were developed prior to the onset of current oil and gas development procedures. The 2.77 acres/well proposed for this project by the Operators is not an

underestimate, it merely reflects the fact that for the in-field developments proposed, the total length of roads and pipes to well locations is reduced. The BLM will not authorize unnecessary and undue disturbance as can be seen in the DEIS alternatives rejected section (DEIS Section 2.5), where an alternative calling for increased disturbance was rejected.

Comment Response 5 - No water from the Platte River system would be used for this project, and it is unlikely that the ground water obtained from southern portions of the CD/WIIPA would be in connection with the surface waters of the Colorado River system. In any event, there is no potential for depletions of greater than 100 acre-ft per year (see DEIS Section 4.1.7.1). Where connection is possible (i.e., wells in the Antelope/Bitter Creek area), the USFWS would be contacted.

Comment Response 6 - SRAs are described in DEIS and FEIS Section 2.2 and include areas with stabilized sand dunes, raptor nesting concentration areas, 2.0-mi sage grouse nesting buffers, crucial big game winter ranges, areas proximal to residences, VRM Class II areas, and areas with high densities of cultural resource sites (see revised Map 2.3 in this FEIS). Increased resource protection would occur in SRAs under Alternatives A and B through surface disturbance limitations. Mitigation measures for this project designed to protect the aforementioned resources would be applied under any alternative selected. In the event that disturbance limitations are temporarily waived to protect the drainage of federal minerals, all other existing mitigation measures would remain in effect, and the BLM would require Operators to reclaim areas as soon as possible to bring the area back in compliance with the surface disturbance limitation criteria.

Comment Response 7 - Comment noted. As stated in DEIS Section 2.5, the BLM has limited control over well spacing/density and non-federal land developments.

Comment Response 8 - The disturbance acreage estimates presented in Table 2.1 are correct. Three well locations could be developed in SRAs under Alternative A if unnecessary short-term disturbance at two of the locations was adequately reclaimed prior to the initiation of development at the third location.

Comment Response 9 - Regardless of the level of development on private and state lands, the BLM cannot preclude development on federal leases. Once lands are leased, the BLM is obligated to allow development. Mitigation measures would be applied under all alternatives. At present, the BLM is unaware of any additional and reasonable potential mitigation measures. If additional measures are identified, the BLM would include these potential measures in future analyses.

Comment Response 10 - See Comment Response 6, above. Potential drainage situations are identified by the BLM Reservoir Management Group based on known well locations and assumed area of well influence. Actual drainage is determined by first calculating recoverable reserves (usually 6 months of production history) and by measuring or calculating reserve parameters. With this information, a radial drainage circle is then calculated. If the drainage circle intersects a federal lease line, then actual drainage is occurring. This information has been added to this FEIS (see Section 1.2.8).

Comment Response 11 - Please refer to Comment Responses 6, 7, 8, 9, and 10, above.

Comment Response 12 - Disturbance acreage estimates include topsoil removal and stockpile areas. The BLM concurs that roads and associated traffic would likely have the greatest impact on area wildlife, and all measures to minimize surface disturbance from roads would be applied (see DEIS Appendix B).

Comment Response 13 - No oil pits are proposed for this project. Reserve pits and other areas containing materials potentially hazardous to wildlife would be isolated from wildlife as identified in DEIS Section 2.6.13.9, items 3 and 5. Additional protection measures (e.g., netting of all pits) may be applied as identified in the ROD for this project.

Comment Response 14 - Please refer to Comment Response 5, above.

Comment Response 15 - The BLM has included this item as a potential mitigation measure in this FEIS (see Section 4.2.3.2).

Comment Response 16 - Applicant-committed mountain plover survey protocol have been modified in this FEIS to more accurately reflect current USFWS survey methods (see FEIS Section 2.6.13.9). Furthermore, since applicant-committed measures are not entirely consistent with USFWS methods, the BLM has included all the relevant text of the revised USFWS presence/absence determination protocol (see FEIS Section 4.2.5.5). Formal conferencing with the USFWS regarding impacts to mountain plover habitats has been initiated, and additional standards for protection may be applied based on conference results. Conference results will be identified in the ROD for this project.

Comment Response 17 - The text has been modified in this FEIS to reflect your comments, and the BLM does initiate informal consultation prior to permitting for all proposed ground-disturbing activities within active prairie dog towns or complexes.

Comment Response 18 - Please refer to Comment Response 5, above.

Comment Response 19 - Comment noted, and while no changes to the DEIS text have been made in Chapter 3.0, changes have been made to Appendix E.

Comment Response 20 - See Comment Response 2, above.

Comment Response 21 - Please refer to Comment Response 16, above.

Comment Response 22 - The BLM would adhere to the directives identified in the February 23, 1999, memo.

Comment Response 23 - The BLM is wholly committed to plan implementation, and a Cooperative Agreement among participating agencies and Operators is currently being developed to further specify responsibilities. The BLM appreciates USFWS's desire for involvement, and we will continue working with the USFWS on plan implementation.

Comment Response 24 - Comment noted; however, since the BLM may not be able to determine areas with ≥4 locations per section in advance of development, it is anticipated that the inventory and monitoring actions identified for these areas would not occur until after development. Nonetheless, the inventory and monitoring efforts identified for the entire CD/WIIPA would occur on these areas prior to development (see DEIS Table D-2.1).

Comment Response 25 - The BLM will involve the USFWS in discussions as to when black-footed ferret surveys should or should not be required, as deemed appropriate by BLM biologists. See also Comment Response 17, above.

Comment Response 26 - Comments noted, and some text changes have been made in this FEIS. Please be advised that if this project is authorized, the BLM will require mountain plover surveys to be conducted pursuant to USFWS protocol (see FEIS Section 4.2.5.5). See also Comment Response 16, above. Since the Wildlife Plan as currently written is an applicant-committed measure, not all of your proposed plan revisions have been made (see FEIS Section D-2.2.2.3).

Comment Response 27 - The BLM will inform the USFWS of any observations of federally listed, proposed, or candidate species made during wildlife surveys.

Comment Response 28 - Please refer to Comment Responses 24 and 26, above.

Comment Response 29 - Comment noted; however, the BLM believes the 825-ft avoidance area currently proposed is adequate, based on the flushing distances found by Call (unpublished data) in an undeveloped area of the Shamrock Hills.

Comment Response 30 - Please refer to Comment Responses 17 and 25, above.

Comment Response 31 - While it is beyond the scope of this EIS to require informal consultation with the USFWS prior to offering leases, your comment has been forwarded to the BLM State Office, and meetings to discuss this issue and others have been conducted. The USFWS will now receive for review BLM's quarterly proposed lease lists, and the USFWS will be solicited for input on all future RMP reviews. Please be assured that site-specific information on potential impacts to federally listed, proposed, and candidate species is gathered prior to development on leased lands during APD and ROW application processing, and conditions of approval would be applied to development proposals to ensure no adverse effects to listed species.

Comment Response 32 - Your comment is noted, and the text has been changed accordingly in this FEIS.

Comment Response 33 - Your comment is noted, and the table has been changed accordingly in this FEIS.

Comment Response 34 - Your comment is noted, and formal consultation with your office to address potential impacts to the black-footed ferret is being conducted. The outcome of this consultation will be presented in the ROD for this project.

Comment Response 35 - Where surveys are required, they would be conducted in accordance with the black-footed ferret survey guidelines presented in USFWS (1989). According to the guidelines, surveys would be conducted on the portions of prairie dog towns found within 0.5 mi of the proposed construction site or ROW border. The BLM is aware that surveys may be necessary in some areas of prairie dog towns that have burrow densities of less than eight per acre.

Comment Response 36 - Surveys for black-footed ferrets would be conducted prior to permit issuance, and if ferrets are found, the USFWS would be consulted to determine necessary project implementation criteria to ensure no adverse effects to ferrets. These criteria would likely involve moving proposed project locations to areas outside of prairie dog colonies. Based on lease term number 6, in the event black-footed ferrets are found and there are no suitable locations on the lease where development could occur without impacting ferret habitat, the BLM would deny surface occupancy on the lease. Changes have been made to the Biological Assessment (see FEIS Appendix E).

Comment Response 37 - Please refer to Comment Responses 17 and 25, above. Decisions on the applicability of surveys with respect to ferret survey guidelines (USFWS 1989) would be thoroughly documented; however, due to the level of effort involved in providing this information to the USFWS, coupled with the authority granted BLM under our current MOU with the USFWS, the BLM believes it is unnecessary to provide the USFWS with this documentation. However, if requested by the USFWS, documentation regarding survey applicability will be provided during informal consultation.

Comment Response 38 - The USFWS would be informed of all actions that could potentially affect federally listed, proposed, or candidate species or their habitats on non-federal lands accessed by proposed project features (see DEIS Table E-4.1).

Comment Response 39 - Comment noted, and appropriate text changes have been made in this FEIS.

Comment Response 40 - The BLM requested formal conferencing procedures with the USFWS to address effects on mountain plover, and the results of this conferencing will be presented in the ROD for this project.

Comment Response 41 - Please refer to specific comment responses, above.

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